Alberta
HUMAN RESOURCES AND EMPLOYMENT

the people & workplace department

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Occupational Injuries and Diseases in Alberta

2000 Summary

Lost-Time Claims and Claim Rates

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Table of Contents

Highlights 1

1. Introduction 2

2. Alberta Human Resources and Employment Initiatives for Workplace Health and Safety 3

3. Alberta Industry Total 5

4. Injury and Disease Analysis 8
   - 4.1 Injured Worker Characteristics 8
   - 4.2 Nature of Injury and Disease 13
   - 4.3 Part of Body Affected 15
   - 4.4 Source of Injury or Disease 17
   - 4.5 Type of Event 19
   - 4.6 Duration of Disability due to Injury or Disease 21

5. Industry Sector Summary 22
   - 5.1 Agriculture and Forestry 25
   - 5.2 Mining and Petroleum Development 27
   - 5.3 Manufacturing and Processing 31
   - 5.4 Construction and Construction Trade Services 36
   - 5.5 Transportation, Communication and Utilities 40
   - 5.6 Retail and Wholesale Trade Services 44
   - 5.7 Public Administration, Education and Health Services 47
   - 5.8 Business, Personal and Professional Services 50

6. WCB Accepted Occupational Fatalities 53
   - 6.1 Description of Fatalities Accepted by the WCB 53
   - 6.2 Occupational Fatality Rates in Industry Sectors 55

References 58

APPENDIX A: Terms, Definitions And Formulas 59
APPENDIX B: WCB Industry Codes 62

APPENDIX C: Selected Graphs 71

Highlights

In 2000,

- There were 38,462 workplace injuries and diseases serious enough to miss at least one day of work. This translates to one disabling occupational injury or disease every 14 minutes.
- The lost-time claim rate was 3.4 per 100 person-years worked. The rate has either decreased or remained the same when compared to the rate from 1991 to 1997. The rate is slightly higher than in 1998 and 1999.
- The lost-time claim rate increased in every sector except Business, Personal and Professional Services, where it remained the same.
- The industry sectors with higher than the provincial lost-time claim rate continued to be Manufacturing and Processing; Agriculture and Forestry; Transportation, Communication and Utilities; and Construction and Construction Trade Services.
- Person-years decreased in Agriculture and Forestry; Mining and Petroleum Development; and Retail and Wholesale Trade Services. The biggest increase in person-years was in Manufacturing and Processing followed by Construction and Construction Trade Services.
- Lack of job experience had an association with increased injury at the workplace.
- Truck drivers experienced the largest number of injuries or disease with time away from work.
- Sprains, strains and tears continued to be the leading type of lost-time injury with the back being the most common injured body part.
- Workers' Compensation Board accepted 118 occupational fatalities. Of these, about 28% were incidents of occupational disease, 25% were motor vehicle incidents and 47% were workplace incidents.

Between the years 1991 and 2000,

- There have been about 100 fatalities for every million person-years worked.
- Fatality rates continued to be higher than average in Agriculture and Forestry; Transportation, Communication and Utilities; Construction and Construction Trade Services; and Mining and Petroleum Development.

1. Introduction

Mission of Alberta Human Resources and Employment

Alberta's buoyant economy, coupled with increased economic activities, has resulted in an increase in injuries in workplaces as more inexperienced workers come into the workplace. Therefore, there is an increased need to promote workplace safety and enforcement of legislation.

Alberta Human Resources and Employment's mission is to foster safe and healthy workplaces. Workplace Health and Safety works within the continuum of services provided by Alberta Human Resources and Employment. Its focus is on the development and implementation of strategies and initiatives aimed at meeting the department's goal that Alberta will have a fair, safe and healthy work environment. To this end, Alberta Human Resources and Employment recognizes that monitoring workplace health and safety will help to ensure that primary concerns are actively managed and that resources are directed where needed.

2000 Lost-Time Claim Summary

In order to provide a comprehensive picture of workplace health and safety, Alberta Human Resources and Employment prepares an annual summary of occupational injury and illness which results in time lost from work. This report includes:

- A descriptive summary of programs and initiatives undertaken by Alberta Human Resources and Employment in pursuit of its mission and goals.
- An estimation of the risk of injury or illness (the lost-time claim rate) in addition to descriptive information regarding the incidents and injured workers.
- Lost-time claim rates at the provincial, major industry sector and industry sub-sector level.
- Analysis of the lost-time injury and illness claims to provide a broader context for the lost-time injury and illness rate.
- Occupational fatalities accepted by Alberta Workers' Compensation Board (WCB) for compensation and fatality rates for the major industry sectors.

While this report focuses on 2000 data, corresponding information for 1999 is also provided for comparison and where possible, historical data are also presented.

About two-thirds of all those employed in Alberta are represented in this report. Exceptions are some agriculture, financial services and federally regulated workers. The information presented in this report is based on incidents of injury or illness that occurred during 2000 and were accepted as lost-time incidents by WCB as of March 31, 2001. It does not show statistics on claims that were accepted for medical expense but shows claims related to time loss from work. The data were used to generate frequencies, percentages and the injury and illness rate.

Terms, definitions, and formulas used throughout this report are described in Appendix A. Industry codes are presented in Appendix B and selected graphs in Appendix C.

2. Alberta Human Resources and Employment Initiatives for Workplace Health and Safety

Workplace Health and Safety continued to ensure that compliance and inspection programs focused on specific industry sectors and employers in 2000. These programs focused on:

- Significant uncontrolled hazards; and
- Poor occupational health and safety performance based on lost-time claim rates, duration rates and WCB Poor Performance Surcharges.

In addition, officers investigated workplace fatalities, serious incidents and complaints regarding occupational health and safety issues.

Two new initiatives were developed and implemented in the areas of workplace health and safety information and communication:

- An interactive web site from which users are able to access and download a large range of information and a variety of publications; and
- A provincial call centre which responds to queries and accepts incident reports and complaints.

A total of twelve additional employees were hired (four of them for the call centre) in order to keep pace with the growth of the Alberta economy and to advance occupational health and safety.

Workplace Health and Safety's Partnerships Program promotes the development of effective health and safety systems within companies. Recent efforts have involved working with stakeholders to enhance standards that would provide improved quality for the certification process of employers. A new audit standard has been approved. All audit instruments used in the Partnerships Program must be amended to meet this new standard by the end of 2001. Roles have been clarified within the program, and the distinction of "Certifying Partner" has been introduced to identify those partners who carry out quality assurance for the issuance of Certificates of Recognition.

With the cooperation of Alberta Justice, arrangements are under way to ensure the availability of a Crown Prosecutor with specialized knowledge in the area of prosecutions under the Occupational Health and Safety Act.

Workplace Health and Safety fosters the identification and management of hazards through the development and provision of quality information. This is accomplished through participation in the development of Canadian Standard Association (CSA) Standards, Codes of Practice, Recommended Practices, Safe Operating Procedures, and Safety Manuals incorporating hazard identification and control as a strategy to reduce worker injury and illness.

Workplace Health and Safety is providing leadership and resources to conduct a comprehensive regulatory review, and to develop interpretive guidelines and enforcement standards. This review process includes consultation with industry and labour before drafting regulations. The process will result in the right balance between regulations which focus on objectives and simplicity, and regulations which provide enough detail to be useful and enforceable. All regulations will be consolidated into a new Occupational Health and Safety Regulation in 2001.

Alberta Human Resources and Employment will continue to promote and address occupational health and safety as an important issue in the workplace. The results will be healthier and safer workplaces, an improved quality of life and more productive and competitive businesses in Alberta.

3. Alberta Industry Total

A total of 38,462 injuries and illnesses that required recuperation away from work beyond the day of the incident were reported in workplaces during 2000. This number represents an increase of about 8.5% from that of 1999 and translates into one disabling occupational injury or illness about every 14 minutes. In contrast, person-years (an estimate of employment) rose by 1.7% to 1,122,785 from 1999 (see Table 3.1).

The lost-time claim rate represents the probability or risk of a disabling injury or disease to a worker during a period of one year of work. The 2000 lost-time claim rate was 3.4 per 100 person-years worked, an increase of about 6.3% from that of 1999 (see Table 3.1). The rate has been calculated from lost-time claims data as of March 31, 2001. This rate underestimates the risk of occupational injury and disease since some lost-time claims that occurred in 2000 were not administered by March 31, 2001. The rate of 3.4 per 100 person-years worked has either decreased or remained the same when compared to the rate from 1991 to 1997. It is higher than in 1998 and 1999 and translates to about 17 injuries and illnesses per million hours worked. Alberta's buoyant economy, with increased economic activities and a strong employment growth has resulted in an increase in incident rates in workplaces as more inexperienced workers come into the workplace.

Employers with 40 to less than 100 person-years had the highest lost-time claim rate of 4.1 per 100 person-years followed by employers with 20 to less than 40 person-years with a claim rate of 3.8 per 100 person-years. Large employers with 100 or more person-years had the lowest claim rate of 3.2 per 100 person-years. Although these larger employers are concentrated in high hazard industries, they generally have good health and safety programs and hazard controls in place.

In 2000, although young workers (15-24 years) represented 17% of those employed in Alberta[1], they accounted for 21% of the injured workers (see Table 4.1A). The industries with high lost-time claims among young workers were Retail and Wholesale Trade; Manufacturing and Processing; and Construction and Construction Trade Services. These three industry sectors accounted for over 65% of lost-time claims among young workers. Although workers aged 55 and older represented 10% of those employed in Alberta in 2000[2], they only accounted for 7% of injured workers.

Estimates of injury and illness severity are made by using information on the number of days away from work to recuperate from each disabling condition. Two basic measures of severity are the median days away from work and the duration rate. In Alberta, the median[3] workdays lost was 8 days, a decrease of about 11.1% from that of 1999. The duration rate - the number of workdays lost per 100 person-years worked indicates, in part, the economic impact of occupational injury and disease. In Alberta, the duration rate of 104 days per 100 person-years worked in 2000 was about 9.5% higher than in 1999 (see Table 3.1).

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1 Statistics Canada's Labour Force Statistics.

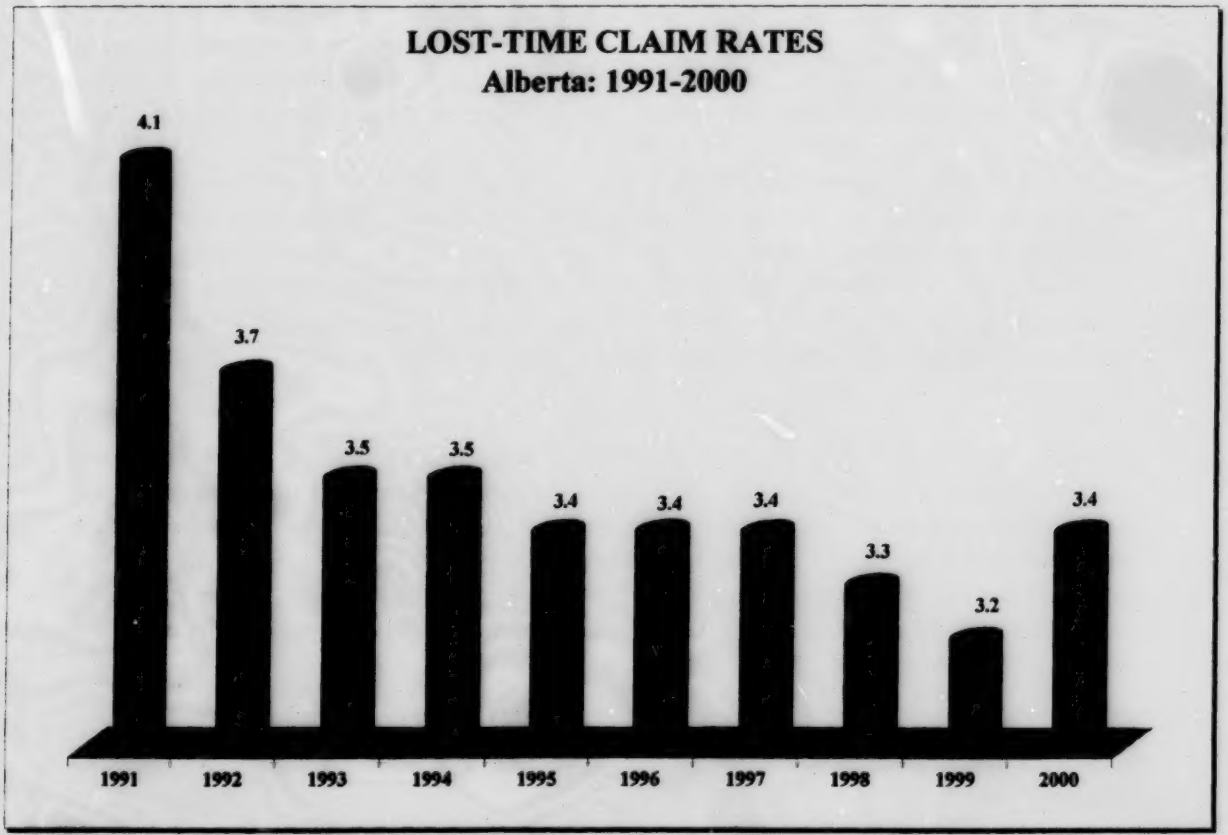
2 Statistics Canada's Labour Force Statistics.

3 A median workday lost designates the point at which half of the total cases involved more days and half involved fewer days.

Duration rates reported here are not normally recommended as reliable indicators of full economic costs since a large number of disability days are not updated until after March 31 of the year following the year of the claim.

Table 3.1
Injury and Disease Statistics[4]
Alberta

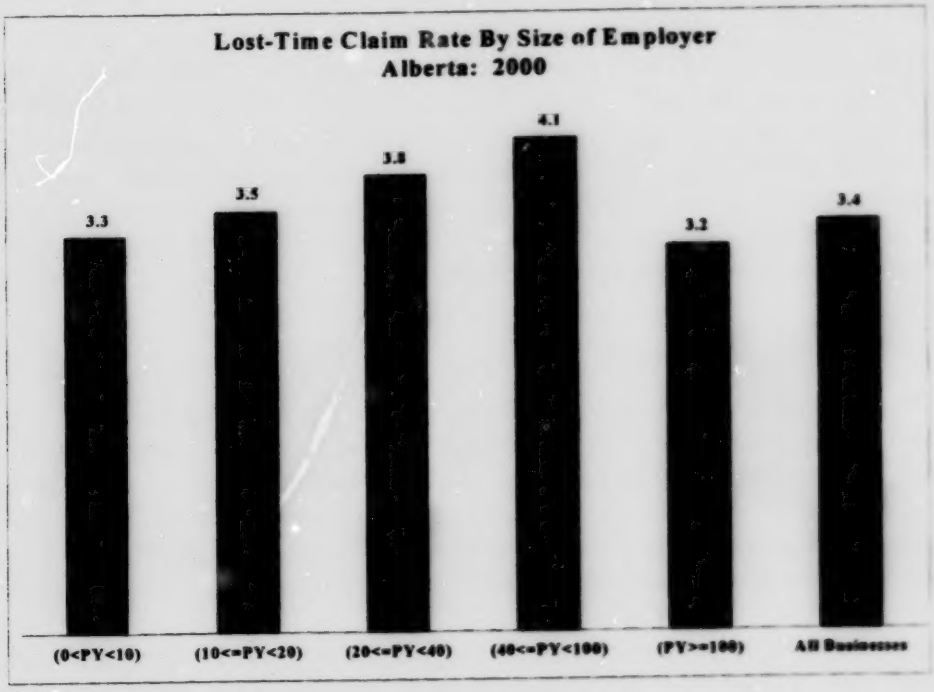
	1999	2000	Percentage Change
Estimated Person-Years	1,103,893	1,122,785	1.7%
Lost-Time Claims	35,440	38,462	8.5%
Lost-Time Claim Rate	3.2	3.4	6.3%
Median Workdays Lost	9	8	-11.1%
Duration Rate	95	104	9.5%



[4] Estimated person-years are calculated from wage and payroll data submitted by employers to the WCB. Estimated person-years for employers who directly bear the cost of their workers' claim are excluded. Lost-time claims for these employers are also excluded unless the WCB has incurred administration or enhanced disability cost.

Table 3.2
Lost-Time Claim Rate By Size[5] of Employer
Alberta: 2000

Size of Employer	Number of Accounts	Lost-Time Claims	Estimated Person-Years	Lost-Time Claim Rate
0 to < 10 person-years	94,736	5,587	170,880	3.3%
10 to < 20 person-years	6,403	3,115	89,804	3.5%
20 to < 40 person-years	3,757	3,988	105,274	3.8%
40 to < 100 person-years	2,364	5,946	146,702	4.1%
100 or more person-years	1,573	19,301	610,125	3.2%
Invalid[6]	2,697	525	0	N/A
Total	111,530	38,462	1,122,785	3.4%



5 Size is measured in terms of estimated person-years. One person-year is equivalent to one full-time worker working for one year. Person-years are estimated from payroll information submitted to the WCB by employers.

6 These are employers with no payroll information or with estimated person-years equal to 0.

4. Injury and Disease Analysis

In addition to considering lost-time claim rates at the provincial, sector and sub-sector level, a more detailed analysis of the claims themselves may provide a better understanding of potential hazards in the workplace. This understanding can then lead to more focussed health and safety programs.

In this section, characteristics of the injured workers whose claims resulted in wage compensation as well as specific details of the occupational injuries and diseases will be examined[7], including:

- physical characteristics of the injury or disease;
- part of body injured;
- source of the injury or disease;
- type of injury or disease event; and
- duration of disability.

While the focus is at the provincial level, some sector information will be highlighted. Throughout this section, the classifications used are based on the Canadian Standards Association (CSA) standards for categorising occupational injury and disease information[8].

4.1 Injured Worker Characteristics

The age, gender, job tenure and occupation of the injured worker are of interest when examining workplace injuries and disease rates. This information can help determine if workplace health and safety programs need to be targeted to specific groups. For example, younger workers may require a different approach than their older counterparts. Similarly, workers new to a job are likely to have different workplace health and safety needs than those who have worked at a job for a longer period of time. Injury and disease rates by age, gender and job tenure were not calculated because denominator data are not available.

Age

Some 21% of claims were from workers between the age 15-24 years (see Table 4.1A), although young workers accounted for only 17% of those employed in Alberta[9]. However, only 17% of claims were from workers between the ages of 45 and 54 years and 7% were 55 years and older while they represented 21% and 10% respectively of those employed in Alberta[10]. Injuries in other age groups were proportionate to their representation among workers in Alberta. Less than 1% of claims did not have information on age. A similar distribution was observed in 1999.

One explanation for this difference among age groups is that young workers often perform more strenuous work, and are more frequently exposed to more hazardous work situations.

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7 Detailed analysis of the pattern among these characteristics and the lost-time claims from 2000 is available.

8 National standards for categorizing injury and disease and comparable information of other province can be found in the CSA Z795 standard.

9 Statistics Canada's Labour Force Survey.

10 Statistics Canada's Labour Force Statistics.

In addition, older workers may be injured less frequently perhaps due to their greater levels of experience. Although workers age 45 and older are less likely than young workers to be injured seriously enough to lose work-time, when they are injured they require more time to recover before returning to work. The duration of absence from work due to workplace injury or disease doubles from a median of 6 days for young workers to a 12-day median for those 45 years and older. Moreover, about 33% of injuries and diseases to workers aged 45 and older resulted in 31 or more days away from work due to injury or disease as compared to 16% for young workers. Factors that may contribute to longer recuperation periods for workers 45 years and above may include the fact that they sustain especially disabling conditions, such as broken bones more often than young workers do. For example, sprains, strains and tears made up 48% of injuries suffered by workers 45 and older compared to 41% for young workers.

Several sectors were noticeably different from the provincial distribution of lost-time claims by the age of the claimants. While at the provincial level, about 21% of all injured workers were young workers (15-24 years), only about 8% were young workers in the Public Administration, Education and Health Services sector. Also about 35% of injured workers were 45 years and older in Public Administration, Education and Health Services sector as compared to 24% at the provincial level.

Table 4.1A
Injuries by Age of Injured Worker, Alberta

Age	1999		2000	
	Number of Claims	%	Number of Claims	%
15 - 19 Years	2,134	6.0%	2,525	6.5%
20 - 24 Years	5,315	15.0%	5,572	14.5%
25 - 34 Years	9,798	27.7%	9,874	25.7%
35 - 44 Years	10,030	28.3%	11,113	28.9%
45 - 54 Years	5,720	16.1%	6,500	16.9%
55+ Years	2,374	6.7%	2,805	7.3%
Unspecified	69	0.2%	73	0.2%
Total	35,440	100.0%	38,462	100.0%

Gender

In 2000, male workers accounted for 7 out of 10 lost-time claims (see Table 4.1B), although they represented about 55% of those employed in Alberta. A similar pattern was observed in 1999 and may be explained in part by the fact that there are more men than women in the labour force and men generally comprise a higher proportion of workers in higher hazard industry sectors.

Males accounted for the majority of the lost-time claims in all sectors except for Public Administration, Education and Health Services, and Business, Personal and Professional Services sectors, where between 57% and 62% of total claims were from females. This pattern may be explained by the fact that these two sectors include many occupations such as sales clerks, nursing and other health-related occupations traditionally held by females.

Table 4.1B
Injuries by Gender of Injured Worker
Alberta

Gender	1999		2000	
	Number of Claims	%	Number of Claims	%
Male	24,895	70.2%	26,790	69.7%
Female	9,812	27.7%	10,980	28.5%
Unspecified	733	2.1%	692	1.8%
Total	35,440	100.0%	38,462	100.0%

Job Tenure

Job tenure measures the length of time that the injured worker had been employed by his or her current employer before the injury or disease. It gives an indication of the amount of job experience of the injured worker.

For about 23% of all claims, job tenure was unspecified. Thus, when examining the percentage distribution and the discussion below, caution should be used when interpreting these data.

Analysis showed that lack of job experience had an association with increased injury at the workplace. Of all the claims submitted by young workers (15-24 years), 58% had less than 6 months work experience. In addition, a separate analysis[11] that examined job experience, gender and age in relation to the number employed in Alberta, found that adult males (aged 25 to 54) with less than 6 months experience had the highest injury rate followed by males aged 55 and older. Part of the explanation for this may lie in the fact that many seasonal or short-term jobs (e.g. in construction or forestry) are also relatively more hazardous.

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11 Alberta Human Resources and Employment, Performance and Applied Research Branch, July 2001.

Table 4.1C
Injuries by Job Tenure of Injured Worker
Alberta

Job Tenure	1999 Number of Claims	1999 %	2000 Number of Claims	2000 %
Less than 1 month	2,916	8.2%	3,338	8.7%
1 month to less than 6 months	6,378	18.0%	7,281	18.9%
6 months to less than 1 year	3,309	9.4%	3,541	9.2%
1 year or more	15,144	42.7%	15,607	40.6%
Unspecified	7,693	21.7%	8,695	22.6%
Total	35,440	100.0%	38,462	100.0%

Occupation

Workplace injuries and diseases vary with occupation. Occupation is used to describe the kind of work performed by the injured worker irrespective of the kind of industry in which it is done. Injury and disease rates by specific occupations were not calculated because denominator data were not available. However, in Alberta, the top two occupations over the years with the largest number of injuries and diseases with time away from work have been truck drivers and non-construction labourers (see Table 4.1D).

Table 4.1D
Injuries by Occupation of Injured Worker
Alberta
(from highest percentage to lowest)

Occupations	1999 Number of Claims	%	2000 Number of Claims	%
Truck Drivers	2,813	7.9%	3,221	8.4%
Labourers – Non-Construction	2,070	5.8%	1,971	5.1%
Welders and Cutters	1,013	2.9%	1,245	3.2%
Sales Clerks – Commodities	868	2.4%	1,010	2.6%
Freight Handlers	783	2.2%	964	2.5%
Chefs and Cooks	803	2.3%	912	2.4%
Carpenters	835	2.4%	869	2.3%
Janitors and Cleaners	709	2.0%	731	1.9%
Shipping and Receiving Clerks	654	1.8%	677	1.8%
Personal Service providers	610	1.7%	662	1.7%
Nursing Aides and Orderlies	669	1.9%	654	1.7%
Nurses – except Supervisors	575	1.6%	591	1.5%
Labourers – Service Sector	570	1.6%	558	1.5%
Labourers – Material Handling	571	1.6%	557	1.4%
Mechanics – Industrial, Farm Machinery	638	1.8%	551	1.4%
All other Occupations	21,259	60.0%	23,289	60.6%
Total	35,440	100.0%	38,462	100.0%

4.2 Nature of Injury and Disease

The nature of injury and disease is used to identify the physical characteristics of the injury and disease. In 2000, close to 90% of all the lost-time claims were traumatic injuries and disorders. Of these, the four most common specific traumatic injuries and disorders were sprains, strains and tears (48%); surface wounds and bruises (12%); open wounds (10%) and fractures and dislocation (9%) (see Table 4.2). A similar distribution was observed in 1999.

Males were far more likely than females to experience all of the four types of traumatic injuries and disorders. However, there were wide variations in their distributions. For example, males as compared to females experienced 66% of all sprains, strains and tears while, for fractures and dislocation, 81% were sustained by males as compared to 18% by females.

Sprains, strains and tears were the most common nature of injury for each of the occupations. The notable exceptions were chefs and cooks where open wounds, like cuts and lacerations, were more common.

The manner in which workers sustain these common severe injuries differed, suggesting that remedies to prevent such injuries need to address a variety of circumstances. A large number of sprains, strains and tears resulted from overexertion while pulling, pushing, lifting and carrying objects. Falls and bodily reaction such as bending, reaching and twisting also resulted in a large number of sprains, strains and tears. In contrast, a large number of work-related wounds (surface and open) were results of workers being struck by or against an object and struck by slipping hand-held objects. The leading causes of fractures and dislocations were falls or the worker being struck by objects.

Sprains, strains and tears were by far the most common injury in every major sector, ranging from a low of 28% in the Agriculture and Forestry sector to a high of 58% in the Public Administration, Education and Health Services sector. The leading category in the Manufacturing and Processing sector was wounds (surface and open) while in the Construction and Construction Trade Services sector, it was fractures and dislocations.

Table 4.2
Nature of Injury or Disease
Alberta

Nature of Injury or Disease[12]	1999 Number of Claims	1999 %	2000 Number of Claims	2000 %
Traumatic Injuries and Disorders	32,083	90.5%	34,526	89.8%
Sprains, Strains, Tears	*17,426*	*49.2%*	*18,431*	*47.9%*
Surface Wounds, Bruises	*4,142*	*11.7%*	*4,429*	*11.5%*
Open Wounds	*3,465*	*9.8%*	*3,693*	*9.6%*
Other Traumatic Injuries and Disorders	*2,966*	*8.4%*	*3,516*	*9.2%*
Fractures, Dislocations	*3,140*	*8.8%*	*3,447*	*9.0%*
Burns	*944*	*2.6%*	*1,010*	*2.6%*
Systematic Diseases and Disorders	1,867	5.3%	2,326	6.1%
Nature - Unknown	1,231	3.5%	1,385	3.5%
Other Diseases, Conditions and Disorders	64	0.2%	92	0.2%
Symptoms, Signs, Ill-Defined Conditions	82	0.2%	72	0.2%
Infectious and Parasitic Diseases	21	0.1%	28	0.1%
Multiple Diseases, Conditions and Disorders	84	0.2%	26	0.1%
Neoplasms, Tumors and Cancer	8	0.0%	7	0.0%
Total	35,440	100.0%	38,462	100.0%

12 The percentage occurrence of sub groups listed is the percentage of the total number of injuries.

4.3 Part of Body Affected

The trunk, including the back, was the main injured body part, accounting for about 41% of total claims in 2000 (see Table 4.3). Injuries to the trunk were mainly sprain, strain and tear injuries affecting the lower back. These injuries often resulted from overexertion or from bodily reaction such as climbing, reaching, twisting and tripping. The next two leading categories were upper extremities (25%) and lower extremities (19%).

Injuries and diseases to the upper extremities were mostly wounds (open and surface) and fractures and dislocation which were commonly caused by a worker either being struck by or against objects or being caught in or compressed by equipment. A large number of injuries and disease to lower extremities were sprains, strains and tears which resulted from being struck by or against objects or from bodily reaction such as climbing, twisting and tripping. Body systems like the circulatory, digestive and respiratory systems were least frequently affected.

In all sectors, injuries to the trunk comprised a significant number of lost-time claims. However, while injuries and diseases to the lower extremities accounted for about 19% of injuries at the provincial level they comprised nearly 28% of the total in the Agriculture and Forestry sector, the highest proportion in any sector.

Table 4.3
Part of Body Injured
Alberta

Part of Body Injured[13]	1999 Number of Claims	1999 %	2000 Number of Claims	2000 %
Trunk	14,660	41.4%	15,568	40.5%
Back including Spine, Spinal Cord	*10,096*	*28.5%*	*10,739*	*27.9%*
Other Trunk	*4,564*	*12.9%*	*4,829*	*12.6%*
Upper Extremities	8,900	25.1%	9,663	25.1%
Hand(s) and Wrist(s), except Finger(s)	*3,449*	*9.7%*	*3,735*	*9.7%*
Finger(s)	*3,215*	*9.1%*	*3,397*	*8.8%*
Other Upper Extremities	*2,236*	*6.3%*	*2,531*	*6.6%*
Lower Extremities	6,566	18.5%	7,110	18.5%
Leg(s)	*3,012*	*8.5%*	*3,332*	*8.7%*
Ankle(s) & Foot(Feet)-not Toes	*3,070*	*8.7%*	*3,269*	*8.5%*
Other Lower Extremities	*484*	*1.3%*	*509*	*1.3%*
Head	2,133	6.0%	2,607	6.8%
Eye(s)-Optic Nerve,Vision	*1,061*	*3.0%*	*1,193*	*3.1%*
Other Head	*1,072*	*3.0%*	*1,414*	*3.7%*
Multiple Body Parts	1,980	5.6%	2,215	5.7%
Neck	951	2.7%	1,048	2.7%
Body Systems	160	0.5%	176	0.5%
Part of Body - Unknown	78	0.2%	63	0.2%
Other Body Parts	12	0.0%	12	0.0%
Total	35,440	100.0%	38,462	100.0%

[13] The percentage occurrence of sub groups listed is the percentage of the total number of injuries.

4.4 Source of Injury or Disease

The source of injury or disease classification is used to describe the object or substance with which the worker came into contact and, as a result, produced an injury or disease.

No one source of injury or disease stood out in 2000, although the following two categories had nearly the same percentage of the case total: persons injured or ill workers (15%); and structures and surfaces (15%) (see Table 4.4).

All of the sources, except person other than injured worker, caused more injuries or disease in males than in females.

The source, persons injured or ill workers, classifies self-injured persons; bodily conditions; and self-induced bodily motion injuries. Injuries and diseases caused by self-induced motion or position comprised mostly of stress and strains induced by the free movement of the body or its parts. This category includes cases resulting from stretching, reaching, twisting, bending, walking, climbing, running or tripping without falling. Another significant source of injuries and diseases was structures and surfaces, such as the floor or the ground resulting in sprains, strains and tears and fractures and dislocations. This contact is usually the result of a fall from height or a fall on the same level.

At the industry sector level, distribution of the principal source of injury or disease was different when compared to the provincial distribution. The two most common sources of injury or disease in the Transportation, Communication and Utilities sector were vehicles for all modes of public, private, work-related and recreational transportation and structures and surfaces like floors, ground and building systems. In Mining and Petroleum Development; and Manufacturing and Processing; the leading source was parts and materials which include machines parts, tool parts and automobile parts as well as building materials, insulating materials and non-structural metal materials. Self-induced motion or position accounted for a high number of injuries in the Retail and Wholesale Trade sector, while persons other than the injured worker, which include injuries inflicted by family members, co-workers and patients, were the leading source of injury in the Public Administration, Education and Health Services sector. This is likely due to the prevalence of injuries suffered while moving patients in the health industries. A leading source of injuries or diseases in the Agriculture and Forestry and Construction and Construction Trade Services sectors was structures and surfaces.

Table 4.4
Source of Injury and Disease
Alberta

Primary Source of Injury[14]	1999 Number of Claims	1999 %	2000 Number of Claims	2000 %
Persons, Plants, Animals and Minerals	7,532	21.3%	8,199	21.3%
Persons-Injured or Ill workers	*5,167*	*14.6%*	*5,623*	*14.6%*
Persons-Other than Injured Worker	*1,522*	*4.3%*	*1,659*	*4.3%*
Minerals-Metallic or Non-metallic (except fuel)	*146*	*0.4%*	*189*	*0.5%*
Other Persons, Plants, Animals and Minerals	*697*	*2.0%*	*728*	*1.9%*
Structures and Surfaces	4,816	13.6%	5,570	14.5%
Parts and Materials	4,073	11.5%	4,432	11.5%
Containers	3,829	10.8%	4,283	11.2%
Vehicles	2,444	6.9%	2,704	7.0%
Tools, Instruments and Equipment	2,247	6.3%	2,437	6.3%
Hand Tools-Non-Powered	*1,316*	*3.7%*	*1,329*	*3.4%*
Hand Tools-Powered	*304*	*0.8%*	*383*	*1.0%*
Other Tools and Equipment	*627*	*1.8%*	*725*	*1.9%*
Machinery	1,960	5.5%	2,172	5.7%
Other Sources	1,269	3.6%	1,601	4.2%
Furniture and Fixtures	1,028	2.9%	1,205	3.1%
Chemicals and Chemical Products	358	1.0%	398	1.0%
Source-Unknown	5,884	16.6%	5,461	14.2%
Total	35,440	100.0%	38,462	100.0%

[14] The percentage occurrence of sub groups listed is the percentage of the total number of injuries.

4.5 Type of Event

This classification is used to describe the incident or event that occurred at the time of the exposure that directly resulted in the injury or disease. While no single descriptor is adequate for injury analysis, the event classification comes closest to providing an explanation for the occupational injury or disease.

Overexertion comprised the largest type of event for lost-time claims in 2000, making up about 26% of total claims (see Table 4.5). Overexertion injuries were mainly sprains, strains and tears injuries which resulted from excessive physical effort in activities such as lifting, pulling, pushing objects and the source of injury was pressurized and non-pressurized containers. This event type mostly resulted in injury to the back. Being struck by or against objects and falls also accounted for about 19% and 16% of total claims respectively. Most cases of being struck by or against an object resulted in wounds (open and surface) to the hand while most of the falls resulted in sprains, strains and tears to the back.

At the industry sector level, overexertion injuries were the most common in all sectors except Agriculture and Forestry; and Mining and Petroleum Development, where being struck by objects were the leading types of event. While the provincial pattern was generally observed in all other sectors, specific patterns are present in certain sectors. For example, total falls comprised about 20% of claims in the Construction and Construction Trade Services sector as compared with 16% at the provincial level. Injuries from struck by or against objects were higher than the provincial level in all sectors except Public Administration, Education and Health Services; and Transportation, Communication and Utilities.

Table 4.5
Type of Event or Exposure, Alberta

Type of Event or Exposure[15]	1999 Number of Claims	1999 %	2000 Number of Claims	2000 %
Bodily Reaction and Exertion	14,574	41.1%	15,736	40.9%
Overexertion	*9,293*	*26.2%*	*9,977*	*25.9%*
Bodily Reaction	*3,741*	*10.6%*	*3,839*	*10.0%*
Repetitive Motions	*1,177*	*3.3%*	*1,507*	*3.9%*
Other Bodily Reaction and Exertion	*363*	*1.0%*	*413*	*1.1%*
Contact with Objects and Equipment	8,969	25.3%	9790	25.4%
Struck by Objects	*4,544*	*12.8%*	*5,000*	*13.0%*
Struck against Objects	*1,982*	*5.6%*	*2,170*	*5.6%*
Caught in Objects	*1,863*	*5.3%*	*1,979*	*5.1%*
Rubbed or Abraded	*504*	*1.4%*	*559*	*1.5%*
Other Contact with Objects and Equipment	*76*	*0.2%*	*82*	*0.2%*
Falls	5428	15.4%	6,043	15.7%
Fall on Same Level	*2,751*	*7.8%*	*3,359*	*8.7%*
Fall to Lower Level	*1,977*	*5.6%*	*2,133*	*5.6%*
Other Falls	*700*	*2.0%*	*551*	*1.4%*
Transportation Accidents	1,523	4.3%	1,829	4.8%
Exposure to Harmful Substances	1,325	3.7%	1,508	3.9%
Assaults and Violent Acts	396	1.1%	469	1.2%
Assaults and Violent Acts by Person	*321*	*0.9%*	*397*	*1.0%*
Other Assaults and Violent Acts	*75*	*0.2%*	*72*	*0.2%*
Fires and Explosions	69	0.2%	62	0.2%
Other Events or Exposure	2	0.0%	0	0.0%
Event-Unknown	3,154	8.9%	3,025	7.9%
Total	35,440	100.0%	38,462	100.0%

[15] The percentage occurrence of sub groups listed is the percentage of the total number of injuries.

4.6 Duration of Disability due to Injury or Disease

The duration of disability refers to the length of time, in days, for which the worker receives wage compensation from the WCB. Duration of disability is intended to reflect the severity of the effects of occupational injury and disease as reflected by the number of days off work. However, the efforts of employers to introduce modified work programs to integrate injured workers more quickly back into the workforce can have major impact on workdays lost.

About 37% of total lost-time claims in 2000 resulted in 5 or less days lost from work while about 26% of total claims resulted in 31 or more days lost from work (see Table 4.6). The median days lost from work as a result of work-related injury or disease was 8 days in 2000, a decrease of over 11% from 1999 (see Table 3.1). The total number of workdays lost after sustaining certain types of injuries or diseases varied widely. Among the major disabling injuries or diseases (see Table 4.2), the median workdays lost was highest for fractures and dislocation - a median of 30 days. Also, injuries to the head resulted in the shortest absence from work (median of 2 days) while injuries to the trunk, including the back, resulted in the longer absence from work (median of 12 days).

For the most part, the sectors followed the provincial distribution regarding duration. However, Agriculture and Forestry; Mining and Petroleum Development; Construction and Construction Trade Services; and Transportation, Communication and Utilities sectors all had a higher proportion of claims with 31 or more days away from work as compared to the provincial figures. In these sectors, long-term claims (31 or more days) comprised between 30% to 37% of total claims. Moreover, the median days away from work varied among the sectors. It ranged from a high of 16 days for Mining and Petroleum Development to a low of 6 days for the Manufacturing and Processing sector (see Table 5.0).

Table 4.6
Duration of Disability Due to Injury or Disease
Alberta

Disability Days	1999		2000	
	Number of Claims	%	Number of Claims	%
1 Day	3,896	11.0%	4,075	10.6%
2 Days	3,028	8.5%	3,267	8.5%
3 - 5 Days	6,112	17.3%	6,709	17.4%
6 - 10 Days	5,101	14.4%	5,467	14.2%
11 - 20 Days	4,496	12.7%	4,800	12.5%
21 - 30 Days	2,479	7.0%	2,566	6.7%
31 Days or more	9,114	25.7%	9,905	25.8%
Unspecified	1,214	3.4%	1,673	4.3%
Total	35,440	100.0%	38,462	100.0%

5. Industry Sector Summary

The risk of occupational injury and disease varies by industry sector. It is therefore important to consider injury and disease statistics by major industry sector, in order to provide a complete picture of workplace health and safety. A summary of occupational injury and disease statistics for major industry sector is presented in Table 5.0.

In the sections that follow, each major sector is described in terms of its composition and demographics of the injured workers. The characteristics of their injury and disease and a graph of its historical lost-time claim rate are also provided. This information provides a framework for interpreting injury and disease rates across and within sectors.

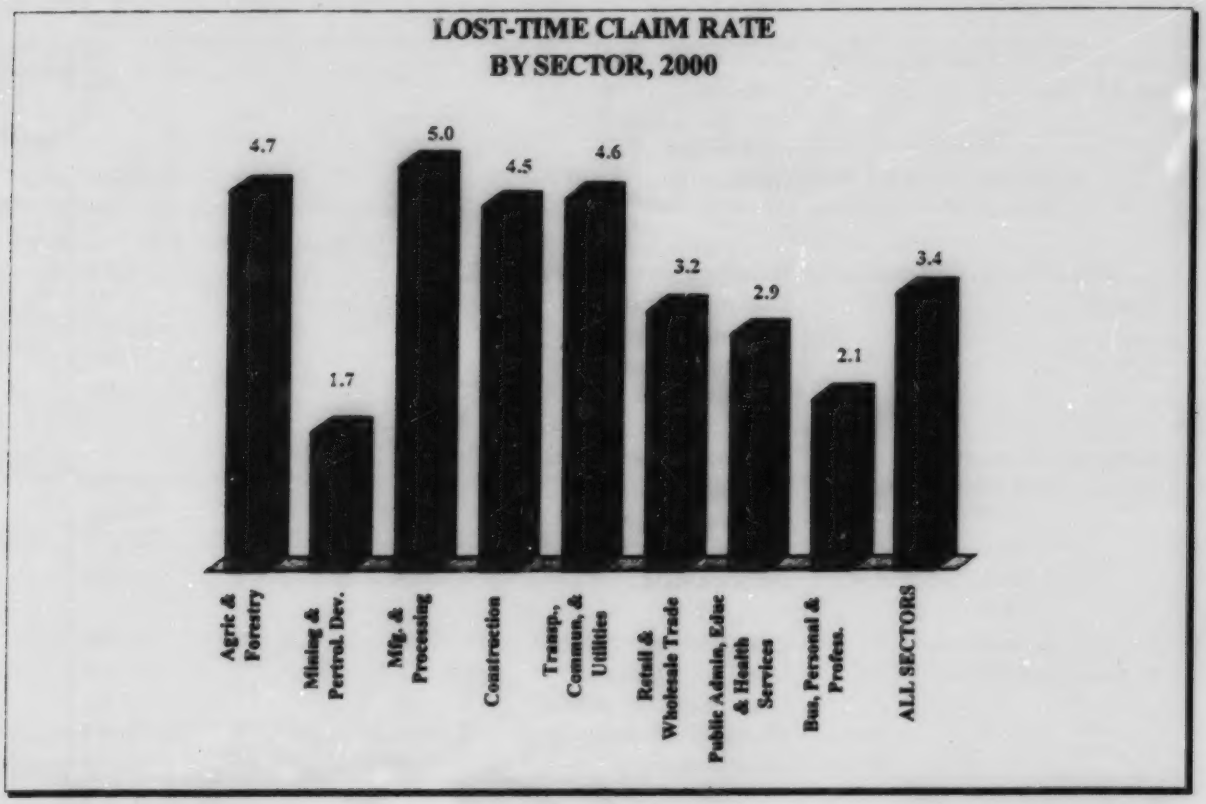
Table 5.0
Injury and Disease Statistics by Major Sector
Alberta

		1999	2000	% Change
Agriculture and Forestry	Estimated Person-years	11,203	10,878	-2.9%
	Lost-time Claims	485	516	6.4%
	Lost-time Claim Rate	4.3	4.7	9.3%
	Median Workdays Lost	14	16	14.3%
	Duration Rate	180	199	10.6%
Mining and Petroleum Development	Estimated Person-years	75,707	71,948	-5.0%
	Lost-time Claims	912	1,210	32.7%
	Lost-time Claim Rate	1.2	1.7	41.7%
	Median Workdays Lost	14	16	14.3%
	Duration Rate	51	72	41.2%
Manufacturing and Processing	Estimated Person-years	151,887	164,940	8.6%
	Lost-time Claims	7,397	8,294	12.1%
	Lost-time Claim Rate	4.9	5.0	2.0%
	Median Workdays Lost	6	6	0.0%
	Duration Rate	107	109	1.9%
Construction and Construction Trade Services	Estimated Person-years	145,051	152,428	5.1%
	Lost-time Claims	6,350	6,909	8.8%
	Lost-time Claim Rate	4.4	4.5	2.3%
	Median Workdays Lost	15	13	-13.3%
	Duration Rate	187	192	2.7%

Continued ....

Table 5.0
Injury and Disease Statistics by Major Sector
Alberta

		1999	2000	% Change
Transportation, Communication and Utilities	Estimated Person-years	93,601	94,712	1.2%
	Lost-time Claims	3,803	4,310	13.3%
	Lost-time Claim Rate	4.1	4.6	12.2%
	Median Workdays Lost	11	12	9.1%
	Duration Rate	141	178	26.2%
Retail and Wholesale Trade Services	Estimated Person-years	229,931	214,047	-6.9%
	Lost-time Claims	6,664	6,761	1.5%
	Lost-time Claim Rate	2.9	3.2	10.3%
	Median Workdays Lost	7	7	0.0%
	Duration Rate	71	77	8.5%
Public Administration, Education and Health Services	Estimated Person-years	201,149	210,224	4.5%
	Lost-time Claims	5,444	6,001	10.2%
	Lost-time Claim Rate	2.7	2.9	7.4%
	Median Workdays Lost	8	8	0.0%
	Duration Rate	68	75	10.3%
Business, Personal and Professional Services	Estimated Person-years	195,365	203,607	4.2%
	Lost-time Claims	4,056	4,356	7.4%
	Lost-time Claim Rate	2.1	2.1	0.0%
	Median Workdays Lost	8	8	0.0%
	Duration Rate	62	63	1.6%


LOST-TIME CLAIM RATE
BY SECTOR, 2000
4.7
1.7
5.0
4.5
4.6
3.2
2.9
2.1
3.4
Agric & Forestry
Mining & Pertrol. Dev.
Mfg. & Processing
Construction
Transp., Commun, & Utilities
Retail & Wholesale Trade
Public Admin, Educ & Health Services
Bus, Personal & Profess.
ALL SECTORS

5.1 Agriculture and Forestry

Sector Description

The Agriculture and Forestry sector includes vegetable farms, greenhouses and market gardens, mushroom farms, apiaries, commercial hatcheries, feed lots, custom harvesting and baling, timber management, logging and related woodlands operations including the trucking of logs. Secondary processing, such as sawmills and pulp mills, are included in the Manufacturing and Processing sector.

Injury and Disease Summary

In 2000, estimated person-years (estimate of employment) in Agriculture and Forestry dropped by 2.9% from 1999. The number of person-years underestimates employment in this sector since agriculture in Alberta is largely exempt from mandatory coverage with the WCB and the person-years estimates are based only on WCB covered employers. Very few dairy farms, grain farms, and ranches have WCB coverage for their workers. The number of lost-time injuries and diseases increased by about 6.4%, resulting in an increase in the lost-time claim rate to 4.7 per 100 person-years worked (see Table 5.1).

The largest category (74%) of injuries and diseases involved males. Although 49% of the claims were from workers between the ages of 25-45 years, close to 30% of the lost-time claims involved young workers (15-24 years). In this sector, 43% of the injured workers had only worked for their current employer for less than six months before the injury or disease. A large number of the lost-time claims were from truck drivers (19%), followed by labourers (16%).

Sprains, strains and tears (34%) were the most common injuries in this sector followed by surface or open wounds (18%). These were caused by either overexertion in lifting objects or by a worker being struck by objects. Injuries to the trunk, including the back, was the most common (33%) body part injured in this sector. Contact with structures and surfaces was the major source of injury in this sector. More than 34% of the injuries and diseases in this sector resulted in 31 or more days away from work. The median workdays lost due to injuries and disease and the duration rate for Agriculture and Forestry increased in 2000 resulting in one of the highest in the province (see Table 5.0).

Both sub-sectors recorded a drop in their estimated person-years: Agriculture (2.1%), Forestry (3.7%). Duration rate and the lost-time claim rate for both sub-sectors increased in 2000 (see Table 5.1). A high proportion (32%) of the injuries were in logging and woodlands operations, followed by timber management (22%).

Table 5.1
Injury and Disease Statistics
Agriculture and Forestry, Alberta

Industry Sector		1999	2000	% Change
Agriculture and Forestry	Estimated Person-years	11,203	10,878	-2.9%
	Lost-time Claims	485	516	6.4%
	Lost-time Claim Rate	4.3	4.7	9.3%
	Median Workdays Lost	14	16	14.3%
	Duration Rate	180	199	10.6%

Sub-Sector		1999	2000	% Change
Agriculture	Estimated Person-years	5,642	5,526	-2.1%
	Lost-time Claims	229	240	4.8%
	Lost-time Claim Rate	4.1	4.3	4.9%
	Duration Rate	126	146	15.9%
Forestry	Estimated Person-years	5,560	5,352	-3.7%
	Lost-time Claims	256	276	7.8%
	Lost-time Claim Rate	4.6	5.2	13.0%
	Duration Rate	235	254	8.1%

5.2 Mining and Petroleum Development

Sector Description

The Mining and Petroleum Development sector includes underground mining, open pit mining, mining and processing of oil sands, oil or gas pipeline transmission, and upstream oil and gas industries such as seismic exploration, drilling of wells, well servicing with service rigs, oilfield downhole services and upstream production. Secondary processing activities, such as oil refineries and petrochemical manufacturing are included in the Manufacturing and Processing sector.

The composition of this sector was altered in 2000 as compared to previous years. Refining of sand and coal, cement and lime manufacturing including quarrying industries were reclassified into this sector from the Manufacturing and Processing sector; and pressure cleaning services were reclassified from this sector into Construction and Construction Trade Services.

Injury and Disease Summary

In 2000, estimated person-years fell by 5% and lost-time claims increased by 33% in this sector (see Table 5.2), resulting in a 42% increase in the lost-time claim rate, from 1.2 per 100 person-years worked to 1.7 per 100 person-years worked.

Like most of the other sectors, a large proportion (96%) of injuries and diseases involved males. About 38% of the injured workers had worked for their current employer for more than a year before the injury or disease. It should be noted that, in this sector, more than a third of the injured workers did not report their length of service with their current employer. A significant number of injured workers were in well drilling (24%) and oilfield downhole services (21%).

More than 3 out of 10 injuries or disease resulting in time away from work in this sector were sprains, strains and tears, often involving the back. Workers being struck by or against objects or overexertion were the major events that resulted in most of the lost-time claims. The primary sources of injury and disease in this sector were parts and materials and worker motion or position. Transportation accidents were higher in this sector than the provincial average. Although, injured workers in this sector had a higher (16) median days away from work due to injury and disease than the provincial average of 8 days, the duration rate of 72 days lost per 100 person-years worked was still well below the provincial value of 104 days lost per 100 person-years worked (see Table 5.0).

All of the sub-sectors except exploration and drilling of oil and gas wells and oilfield downhole services saw a reduction in their estimated person-years. The lost-time claim rates for all sub-sectors were below the provincial rate except for exploration (4.0), drilling of oil and gas wells (5.0) and well servicing with service rigs (4.1). These three sub-sectors continued to have high

duration rates as well (see Table 5.2).

Table 5.2
Injury and Disease Statistics
Mining and Petroleum Development Sector

Industry Sector		1999	2000	% Change
Mining and Petroleum Development	Estimated Person-years	75,707	71,948	-5.0%
	Lost-time Claims	912	1,210	32.7%
	Lost-time Claim Rate	1.2	1.7	41.7%
	Median Workdays Lost	14	16	14.3%
	Duration Rate	51	72	41.2%

Sub-Sector		1999	2000	% Change
Coal Mining	Estimated Person-years	3,079	2,851	-7.5%
	Lost-time Claims	107	66	-37.5%
	Lost-time Claim Rate	3.5	2.3	-34.3%
	Duration Rate	107	58	-41.7%
Pipeline Cleaning and Transmission	Estimated Person-years	5,904	4,332	-26.6%
	Lost-time Claims	22	21	-4.5%
	Lost-time Claim Rate	0.4	0.5	25.0%
	Duration Rate	13	14	7.7%

Continued .....

Table 5.2 (cont.)
Injury and Disease Statistics
Mining and Petroleum Development Sector

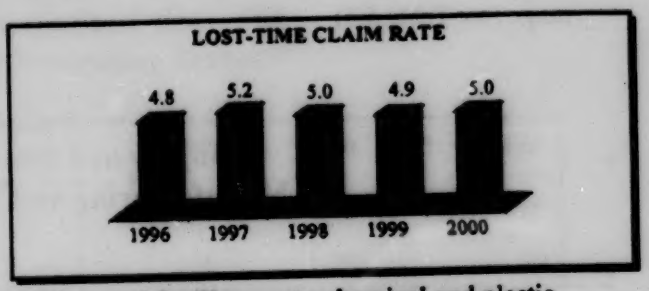
Sub-Sector		1999	2000	% Change
Petroleum Producers	Estimated Person-years	32,275	29,385	-9.0%
	Lost-time Claims	101	90	-10.9%
	Lost-time Claim Rate	0.3	0.3	0.0%
	Duration Rate	8	7	-12.5%
Mine and Process of Tar Sands and Salt	Estimated Person-years	7,064	6,561	-7.1%
	Lost-time Claims	35	31	-11.4%
	Lost-time Claim Rate	0.5	0.5	0.0%
	Duration Rate	9	16	77.8%
Exploration	Estimated Person-years	2,224	2,807	26.2%
	Lost-time Claims	74	112	51.4%
	Lost-time Claim Rate	3.3	4.0	21.2%
	Duration Rate	215	172	-20.0%
Drilling of Oil and Gas Wells	Estimated Person-years	5,137	5,707	11.1%
	Lost-time Claims	133	287	115.8%
	Lost-time Claim Rate	2.6	5.0	92.3%
	Duration Rate	154	306	98.7%

Continued....

Table 5.2 (cont.)
Injury and Disease Statistics
Mining and Petroleum Development Sector

Sub-Sector		1999	2000	% Change
Well Servicing with Service Rigs	Estimated Person-years	4,197	3,989	-5.0%
	Lost-time Claims	137	163	19.0%
	Lost-time Claim Rate	3.3	4.1	24.2%
	Duration Rate	154	185	20.1%
Oilfield Downhole Services	Estimated Person-years	11,224	11,549	2.9%
	Lost-time Claims	180	260	44.4%
	Lost-time Claim Rate	1.6	2.3	43.8%
	Duration Rate	54	73	35.2%

5.3 Manufacturing and Processing



Sector Description

The Manufacturing and Processing sector includes meat, hides and pelts; clothing and textiles; food and beverages; wood products; furniture and allied products; printing and publishing; rubber, clay and concrete products; metal foundries and products; instrumentation; and fertilizer, petrochemical and plastic products and crude oil refining.

The composition of this sector was altered in 2000 as compared to previous years. Refining of sand and coal, cement and lime manufacturing including quarrying industries were reclassified from this sector to the Mining and Petroleum Development sector; and the scrap salvage dealers industry was reclassified into this sector from Construction and Construction Trade Services.

Injury and Disease Summary

Both estimated person-years and total lost-time claims increased in 2000 resulting in an increase in lost-time claim rate of 2% to 5.0 per 100 person-years, making it the highest rate of all the industry sectors (see Table 5.3).

A significant number (60%) of lost-time claims in this sector involved workers in the 25-45 years age group. More than half of the injured workers had been working for a year or more before the injury or disease, suggesting that many experienced workers in this sector incur lost work-time injuries. Males accounted for the 83% of the lost-time claims. Welders and flame cutters (16%) experienced the largest number of injuries and disease in this sector, followed by labourers (12%).

Sprains, strains and tears, which were mostly caused by either overexertion in lifting or pulling objects or by a worker being struck by or against an object, were the leading cause of injuries in this sector. Injuries to the trunk including the back (36%), followed by fingers (14%), were the most common injured body parts. The leading sources of injury in this sector were parts of machines or materials. About 19% of the lost-time claims resulted in between 31 days or more days of work lost. This sector had the lowest median workdays lost (6) due to occupational injury and disease and a duration rate of 109 days per 100 person-years worked.

Of all the sub-sectors that had an increase in their lost-time claim rate, the manufacture of clothing and textiles sub-sector had the largest increase (53%) followed by printing and publishing (20%). The wood products sub-sector had the largest increase in person-years (14%). Manufacture of fabricated and primary steel products and wood products continued to be the largest sub-sector in terms of person-years. The furniture and allied products; food and beverage

products; and meat, hides and pelts products sub-sectors had high duration rates in the 151-250 range (see Table 5.3).

Table 5.3
Injury and Disease Statistics
Manufacturing and Processing Sector

Industry Sector		1999	2000	% Change
Manufacturing and Processing	Estimated Person-years	151,887	164,940	8.6%
	Lost-time Claims	7,397	8,294	12.1%
	Lost-time Claim Rate	4.9	5.0	2.0%
	Median Workdays Lost	6	6	0.0%
	Duration Rate	107	109	1.9%

Sub-Sector		1999	2000	% Change
Meat, Hides and Pelts	Estimated Person-years	12,077	12,283	1.7%
	Lost-time Claims	1,113	1,033	-7.2%
	Lost-time Claim Rate	9.2	8.4	-8.7%
	Duration Rate	170	151	-11.2%
Clothing and Textiles	Estimated Person-years	4,476	4,201	-6.1%
	Lost-time Claims	87	121	39.1%
	Lost-time Claim Rate	1.9	2.9	52.6%
	Duration Rate	57	89	56.1%

Continued ...

Table 5.3 (cont.)
Injury and Disease Statistics
Manufacturing and Processing Sector

Sub-Sector		1999	2000	% Change
Food and Beverages	Estimated Person-years	14,777	15,354	3.9%
	Lost-time Claims	936	1,092	16.7%
	Lost-time Claim Rate	6.3	7.1	12.7%
	Duration Rate	140	156	11.4%
Industrial Equipment	Estimated Person-years	6,945	7,264	4.6%
	Lost-time Claims	171	170	-0.6%
	Lost-time Claim Rate	2.5	2.3	-8.0%
	Duration Rate	44	60	36.4%
Wood Products	Estimated Person-years	23,072	26,334	14.1%
	Lost-time Claims	1,348	1,460	8.3%
	Lost-time Claim Rate	5.8	5.5	-5.2%
	Duration Rate	128	123	-3.9%
Furniture and Allied Products	Estimated Person-years	1,860	1,889	1.6%
	Lost-time Claims	186	199	7.0%
	Lost-time Claim Rate	10	10.5	5.0%
	Duration Rate	226	250	10.6%

Continued ...

Table 5.3 (cont.)
Injury and Disease Statistics
Manufacturing and Processing Sector

Sub-Sector		1999	2000	% Change
Printing and Publishing	Estimated Person-years	12,112	12,984	7.2%
	Lost-time Claims	180	232	28.9%
	Lost-time Claim Rate	1.5	1.8	20.0%
	Duration Rate	46	41	-10.9%
Foundries (not Steel), Rubber and Nonmetallic Minerals	Estimated Person-years	6,752	7,148	5.9%
	Lost-time Claims	305	348	14.1%
	Lost-time Claim Rate	4.5	4.9	8.9%
	Duration Rate	117	145	23.9%
Fabricated and Primary Metal (esp. Steel) Products	Estimated Person-years	41,052	46,470	13.2%
	Lost-time Claims	2,359	2,912	23.4%
	Lost-time Claim Rate	5.7	6.3	10.5%
	Duration Rate	128	133	3.9%

Continued ....

Table 5.3 (cont.)
Injury and Disease Statistics
Manufacturing and Processing Sector

Sub-Sector		1999	2000	% Change
Gases, Fertilizer and	Estimated Person-years	9,685	10,018	3.4%
Petrochemical Products -	Lost-time Claims	73	94	28.8%
Refining & Mfg .	Lost-time Claim Rate	0.8	0.9	12.5%
	Duration Rate	19	21	10.5%
Plastic Products	Estimated Person-years	4,609	4,450	-3.4%
	Lost-time Claims	253	245	-3.2%
	Lost-time Claim Rate	5.5	5.5	0.0%
	Duration Rate	116	114	-1.7%

5.4 Construction and Construction Trade Services

Sector Description

The Construction and Construction Trade Services sector includes residential construction, industrial construction, road building, industrial labour, and specialized construction trades such as roofing, plumbing, painting, electrical wiring, and bricklaying and masonry.

The composition of this sector was altered in 2000 as compared to previous years. Pressure cleaning services industry was reclassified into this sector from Mining and Petroleum Development sector; and the scrap salvage dealers industry was reclassified from this sector into Manufacturing and Processing.

Injury and Disease Summary

Estimated person-years worked in 2000 increased by 5% (see Table 5.4) from 1999. Total lost-time claims increased by 9%, resulting in an increase in the lost-time claim rate of about 2%, from 4.4 to 4.5 per 100 person-years worked.

In this sector, a significant number (93%) of lost-time claims involved males. About 34% of the injured workers in this sector had worked for their current employer for less than 6 months before the injury or disease. A significant number (22%) of injured workers were young workers. About 13% of the injured workers were carpenters.

Once again, sprains strains and tears were the most common (44%) injuries in this sector. The type of events or exposures that resulted in lost-time claims were either overexertion in lifting or pushing objects or a worker was struck by an object or against an object. The body part that was injured the most was the trunk (38%), of which, 25% of the injuries were to the back. A significant number (35%) of injuries or diseases in this sector resulted in 31 or more days away from work. This sector's duration rate increased by 3%, making it the second highest in the province. The 2000 duration rate of 192 days per 100 person-years worked was higher than the provincial value. The median workdays lost due to injuries and disease of 13 days was the third highest of all the sectors.

All the sub-sectors except glaziers, masonry and roofers reported a growth in estimated person-years. Although the scaffolder sub-sector had the largest increase (19%) in person-years in 2000, it still had the lowest lost-time claim rate in this sector. All sub-sectors, except the scaffolders had a higher duration rate than the provincial average. Especially high duration rates were seen in the roofing (447), masonry (392), drywall and residential construction (247) and industrial construction (225) sub-sectors (see Table 5.4).

Table 5.4
Injury and Disease Statistics
Construction and Construction Trade Services

Industry Sector		1999	2000	% Change
Construction and Construction Trade Services	Estimated Person-years	145,051	152,428	5.1%
	Lost-time Claims	6,350	6,909	8.8%
	Lost-time Claim Rate	4.4	4.5	2.3%
	Median Workdays Lost	15	13	-13.3%
	Duration Rate	187	192	2.7%

Sub-Sector		1999	2000	% Change
Drywall and Residential Construction	Estimated Person-years	30,597	32,153	5.1%
	Lost-time Claims	1,649	1,730	4.9%
	Lost-time Claim Rate	5.4	5.4	0.0%
	Duration Rate	262	247	-5.7%
Glaziers	Estimated Person-years	6,278	6,026	-4.0%
	Lost-time Claims	367	360	-1.9%
	Lost-time Claim Rate	5.8	6.0	3.4%
	Duration Rate	137	179	30.7%

Continued ....

Table 5.4 (cont.)
Injury and Disease Statistics
Construction and Construction Trade Services

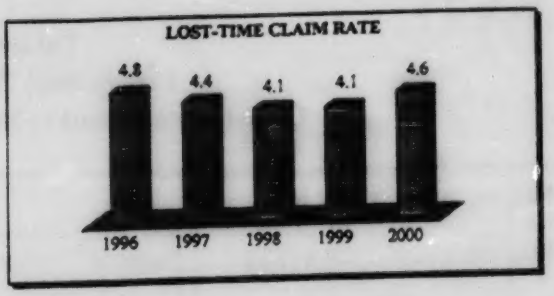
Sub-Sector		1999	2000	% Change
Industrial Construction	Estimated Person-years	28,928	31,128	7.6%
	Lost-time Claims	1,450	1,673	15.4%
	Lost-time Claim Rate	5.0	5.4	8.0%
	Duration Rate	195	225	15.4%
Masonry	Estimated Person-years	868	843	-2.9%
	Lost-time Claims	88	86	-2.3%
	Lost-time Claim Rate	10.1	10.2	1.0%
	Duration Rate	436	392	-10.1%
Mechanical and Electrical Insulation	Estimated Person-years	25,087	26,238	4.6%
	Lost-time Claims	1,011	1,039	2.8%
	Lost-time Claim Rate	4.0	4.0	0.0%
	Duration Rate	120	118	-1.7%
Roadbuilders	Estimated Person-years	24,623	24,985	1.5%
	Lost-time Claims	823	989	20.2%
	Lost-time Claim Rate	3.3	4.0	21.2%
	Duration Rate	185	207	11.9%

Continued ...

Table 5.4 (cont.)
Injury and Disease Statistics
Construction and Construction Trade Services

Sub-Sector		1999	2000	% Change
Roofers	Estimated Person-years	3,889	3,492	-10.2%
	Lost-time Claims	281	277	-1.4%
	Lost-time Claim Rate	7.2	7.9	9.7%
	Duration Rate	445	447	0.4%
Scaffolders	Estimated Person-years	1,332	1,591	19.4%
	Lost-time Claims	27	29	7.4%
	Lost-time Claim Rate	2.0	1.8	-10.0%
	Duration Rate	64	70	9.4%

5.5 Transportation, Communication and Utilities



Sector Description

The Transportation, Communication and Utilities sector consists of various modes of transportation (air, rail, truck, bus, taxi cab and limousine services), assorted methods of communication and entertainment (radio, television, movies, live theatre, telecommunications, cable vision), and utilities (electricity, natural gas, and garbage collection, recycling and disposal).

Injury and Disease Summary

Both estimated person-years and lost-time claims increased in 2000 in the Transportation, Communication and Utilities sector (see Table 5.5), resulting in an increase in the lost-time claim rate to 4.6 per 100 person-years.

Workers aged 25-45 years made up a large proportion of the lost-time claims in this sector. About 3 out of 5 workers had at least one year of service with their employer when they sustained their injury or disease. Truck drivers led all occupations, accounting for 52% of the total lost-time claims.

Sprains, strains and tears were the leading (52%) nature of injury or disease in this sector. The trunk (44%), including the back, was the body part most affected by disabling work incidents in this sector followed by injuries to ankles and feet. No one source of injury or disease stood out, although, the following accounted for 15-17% of the total lost-time claims: vehicles, structures and surfaces or containers. Overexertion while manoeuvring objects led all other disabling events or exposures with 26% of the total claims. The sector's median workdays lost due to injury and disease of 12 days and a duration rate of 178 days per 100 person-years worked was among the highest in the province, exceeded by only the Agriculture and Forestry, and Construction sectors (see Table 5.0).

The electricity sub-sector had the largest increase (11%) in estimated person-years while the air services sub-sector saw the largest (32%) increase in the lost-time claim rate followed by bus, taxi and limousine services (26%). The garbage collection, recycle, disposal and towing vehicles sub-sector had the highest lost-time claim rate of 7.2 per 100 person-years followed by trucking services with a rate of 6.8 per 100 person-years in 2000. Within this sector, the trucking services, and garbage collection, recycling, disposal, towing vehicles and bus, taxi and limousine services, air services and rail services sub-sectors had higher duration rates than the provincial value of 104 per 100 person years (see Table 5.5).

Table 5.5
Injury and Disease Statistics
Transportation, Communication & Utilities

Industry Sector		1999	2000	% Change
Transportation, Communication and Utilities	Estimated Person-years	93,601	94,712	1.2%
	Lost-time Claims	3,803	4,310	13.3%
	Lost-time Claim Rate	4.1	4.6	12.2%
	Median Workdays Lost	11	12	9.1%
	Duration Rate	141	178	26.2%

Industry Sector		1999	2000	% Change
Air Services	Estimated Person-years	10,443	10,059	-3.7%
	Lost-time Claims	360	454	26.1%
	Lost-time Claim Rate	3.4	4.5	32.4%
	Duration Rate	63	123	95.2%
Rail Services	Estimated Person-years	8,853	8,117	-8.3%
	Lost-time Claims	193	200	3.6%
	Lost-time Claim Rate	2.2	2.5	13.6%
	Duration Rate	109	112	2.8%

Continued ...

Table 5.5 (cont.)
Injury and Disease Statistics
Transportation, Communication & Utilities

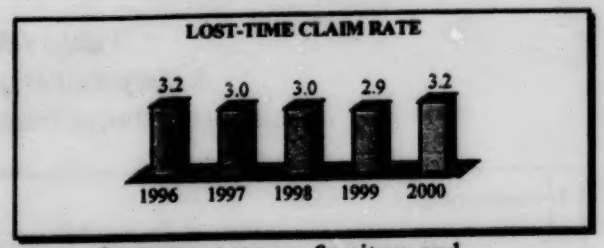
Industry Sector		1999	2000	% Change
Trucking Services	Estimated Person-years	37,553	39,506	5.2%
	Lost-time Claims	2,340	2,705	15.6%
	Lost-time Claim Rate	6.2	6.8	9.7%
	Duration Rate	243	307	26.3%
Bus,Taxi and Limousine Services	Estimated Person-years	4,563	4,824	5.7%
	Lost-time Claims	158	212	34.2%
	Lost-time Claim Rate	3.5	4.4	25.7%
	Duration Rate	131	171	30.5%
Radio, TV, Movies, Live Theatre and Ballet	Estimated Person-years	4,679	3,953	-15.5%
	Lost-time Claims	62	63	1.6%
	Lost-time Claim Rate	1.3	1.6	23.1%
	Duration Rate	60	41	-31.7%
Telecommunications, Closed Circuit TV and Cablevision	Estimated Person-years	12,739	13,001	2.1%
	Lost-time Claims	112	116	3.6%
	Lost-time Claim Rate	0.9	0.9	0.0%
	Duration Rate	17	26	52.9%

Continued ....

Table 5.5 (cont.)
Injury and Disease Statistics
Transportation, Communication & Utilities

Industry Sector		1999	2000	% Change
Utility-Electric	Estimated Person-years	5,914	6,569	11.1%
	Lost-time Claims	68	65	-4.4%
	Lost-time Claim Rate	1.1	1.0	-9.1%
	Duration Rate	15	20	33.3%
Utility-Natural Gas	Estimated Person-years	3,097	2,703	-12.7%
	Lost-time Claims	55	37	-32.7%
	Lost-time Claim Rate	1.8	1.4	-22.2%
	Duration Rate	30	13	-56.7%
Garbage collection, Recycle, Disposal and Towing Vehicles	Estimated Person-years	3,074	2,981	-3.0%
	Lost-time Claims	204	214	4.9%
	Lost-time Claim Rate	6.6	7.2	9.1%
	Duration Rate	176	213	21.0%

5.6 Retail and Wholesale Trade Services



Sector Description

The Retail and Wholesale Trade Services sector includes wholesale operations, food and beverage stores, department stores, furniture and appliance stores, home improvement centres, the sale and service of automobiles, trailers, industrial and farm equipment, and office and medical equipment.

Injury and Disease Summary

Retail and Wholesale Trade Services is the largest sector in Alberta in terms of person-years (see Table 5.0). It's estimated person-years made up about 19% of the total provincial person-years in 2000. The 2000 lost-time claim rate of 3.2 per 100 person-years worked was 10% higher for this sector than in 1999 (see Table 5.6). The 2000 lost-time claim rate for this sector was among the lowest in the province.

This is one of the few sectors where the proportion of injured female workers was higher than the proportion of female workers injured overall in the province. Workers aged 25-45 years and those that had worked for at least one year with their current employer before the injury or disease made up a large proportion of the total lost-time claims. Commodity sales clerks made up a significant number (17%) of lost-time claims, followed by truck drivers (8%).

Sprains, strains and tears was the leading (51%) nature of injury category. The trunk, including the back, was the most common (43%) body part injured. Containers including boxes and crates were the leading (20%) source of injury or disease and overexertion in lifting or pushing or pulling objects was the event type or exposure that resulted in 30% of the lost-time claims. The median workdays lost of 7 days and the duration rate of 77 days per 100 person-years worked were among the lowest in the province and lower than the provincial averages.

All sub-sectors saw their lost-time claim rates increase in 2000 except the food and beverage sub-sector. The food and beverage sub-sector saw a 3.4% decrease in its lost-time claim rate. While most of the sub-sectors' lost-time claim rates were at or below the sector level, food and beverage stores, yards and home improvement centres and automobiles and sports vehicles had high lost-time claim rates of 5.6, 4.9 and 4.0 per 100 person-years respectively. Regarding duration rates, all sub-sectors had rates at or below the provincial average, except the food and beverage; yards and home improvement centres; and automobiles, sport vehicles, small engines and trailers (see Table 5.6).

Table 5.6
Injury and Disease Statistics
Retail and Wholesale Trade Services

Industry Sector		1999	2000	% Change
Retail and Wholesale Trade Services	Estimated Person-years	229,931	214,047	-6.9%
	Lost-time Claims	6,664	6,761	1.5%
	Lost-time Claim Rate	2.9	3.2	10.3%
	Median Workdays Lost	7	7	0.0%
	Duration Rate	71	77	8.5%

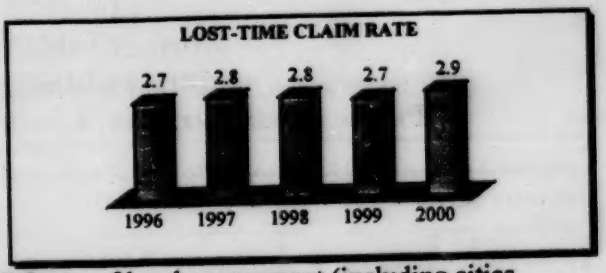
Industry Sector		1999	2000	% Change
Wholesale Operations	Estimated Person-years	21,731	20,903	-3.8%
	Lost-time Claims	446	533	19.5%
	Lost-time Claim Rate	2.1	2.5	19.0%
	Duration Rate	52	59	13.5%
Food and Beverage Stores	Estimated Person-years	40,014	45,426	13.5%
	Lost-time Claims	2,302	2,546	10.6%
	Lost-time Claim Rate	5.8	5.6	-3.4%
	Duration Rate	132	129	-2.3%
Industrial and Farm Equipment and Products	Estimated Person-years	37,559	34,988	-6.8%
	Lost-time Claims	787	911	15.8%
	Lost-time Claim Rate	2.1	2.6	23.8%
	Duration Rate	59	67	13.6%

Continued ....

Table 5.6 (cont.)
Injury and Disease Statistics
Retail and Wholesale Trade Services

Industry Sector		1999	2000	% Change
Automobiles, Sport	Estimated Person-years	36,821	19,329	-47.5%
Vehicles, Small Engines and	Lost-time Claims	1,321	773	-41.5%
Trailers	Lost-time Claim Rate	3.6	4.0	11.1%
	Duration Rate	93	105	12.9%
Office, Medical and	Estimated Person-years	16,399	15,625	-4.7%
Entertainment Equipment	Lost-time Claims	92	109	18.5%
	Lost-time Claim Rate	0.6	0.7	16.7%
	Duration Rate	21	13	-38.1%
Yards and Home	Estimated Person-years	8,373	8,036	-4.0%
Improvement Centres	Lost-time Claims	406	395	-2.7%
	Lost-time Claim Rate	4.8	4.9	2.1%
	Duration Rate	101	132	30.7%
Other Retail Services	Estimated Person-years	68,489	69,173	1.0%
	Lost-time Claims	1,297	1,486	14.0%
	Lost-time Claim Rate	1.9	2.1	10.5%
	Duration Rate	43	53	23.3%

5.7 Public Administration, Education and Health Services



Sector Description

Public Administration includes the Government of Alberta and its agencies, and all forms of local government (including cities, towns, villages and municipal districts). Education services include universities, colleges, business schools, driving schools, kindergartens, museums and libraries. Health services include health care centres, long term care facilities and home support services.

The composition of this sector was somewhat altered in 1999 as compared with previous years. Health units were reclassified into this sector from the sector listed as Business, Personal and Professional Services.

Injury and Disease Summary

Both person-years and total lost-time claims increased in 2000 in Public Administration, Education and Health Services (see Table 5.7), resulting in a 7% increase in the lost-time claim rate. The 2000 lost-time claim rate of 2.9 per 100 person-years continued to be among the lowest in the province (see Table 5.0).

This is one of three sectors where 62% of lost-time claims involved females. Like all other sectors, 57% of the injured workers were between 25-45 years. About 4 out of 5 workers had at least a year of service with their employer when they sustained their injury or disease. A large number (25%) of the claims were from nurses, nursing aides and orderlies.

Sprains, strains and tears injuries made up the largest (64%) proportion of the lost-time claims. The trunk, including the back, was the most common (50%) body part injured. About 38% of all the injuries and diseases in this sector were caused by overexertion in manoeuvring objects. The main or primary source of injury or disease in this sector was persons other than the injured worker followed by bodily position or motion of the injured worker. While the median (8) workdays lost due to injury and disease and the duration rate (75) for this sector were below the provincial figures, *caution should be used when comparing the duration rate in this sector with the duration rates for other sectors. Due to a special arrangement involving provincial government employees, not all disability days are recorded by the WCB and, therefore, the duration rate for this sector may be underestimated.*

Health and social services; health care centres; and villages, towns, and cities sub-sectors had lost-time claim rates, which exceeded both the sector and provincial rates. The Alberta government public service sub-sector had the lowest lost-time claim rate in this sector. The duration rate of all the sub-sectors except Health and Social Services were below the provincial rate.

Table 5.7
Injury and Disease Statistics
Public Administration, Education and Health Services

Industry Sector		1999	2000	% Change
Public Administration, Education and Health Services	Estimated Person-years	201,149	210,224	4.5%
	Lost-time Claims	5,444	6,001	10.2%
	Lost-time Claim Rate	2.7	2.9	7.4%
	Median Workdays Lost	8	8	0.0%
	Duration Rate	68	75	10.3%

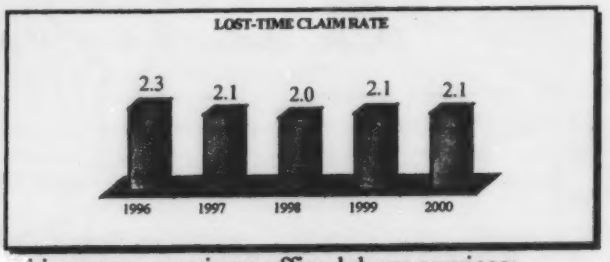
Sub-Sector		1999	2000	% Change
Alberta Government Public Service	Estimated Person-years	26,280	27,886	6.1%
	Lost-time Claims	260	250	-3.8%
	Lost-time Claim Rate	1.0	0.9	-10.0%
	Duration Rate	30	22	-26.7%
Health Care Centres	Estimated Person-years	48,143	50,404	4.7%
	Lost-time Claims	1,666	1,812	8.8%
	Lost-time Claim Rate	3.5	3.6	2.9%
	Duration Rate	83	98	18.1%

Continued .....

Table 5.7 (cont.)
Injury and Disease Statistics
Public Administration, Education and Health Services

Industry Sector		1999	2000	% Change
Health and Social Services	Estimated Person-years	33,173	35,037	5.6%
	Lost-time Claims	1,450	1,623	11.9%
	Lost-time Claim Rate	4.4	4.6	4.5%
	Duration Rate	132	140	6.1%
Villages , Towns and Cities	Estimated Person-years	29,848	30,105	0.9%
	Lost-time Claims	1,122	1,317	17.4%
	Lost-time Claim Rate	3.8	4.4	15.8%
	Duration Rate	69	92	33.3%
Other Public Administration	Estimated Person-years	6,742	6,961	3.2%
	Lost-time Claims	197	189	-4.1%
	Lost-time Claim Rate	2.9	2.7	-6.9%
	Duration Rate	79	71	-10.1%
Education, Museums and Libraries	Estimated Person-years	56,963	59,832	5.0%
	Lost-time Claims	749	810	8.1%
	Lost-time Claim Rate	1.3	1.4	7.7%
	Duration Rate	35	36	2.9%

5.8 Business, Personal and Professional Services



Sector Description

The Business, Personal and Professional Services sector includes building and grounds maintenance; financial, real estate and insurance services; office labour services; engineering, architectural and research services; restaurants, motels, hotels and recreation; security services; seniors lodges; and health units, private health and social services and veterinary services.

The composition of this sector was altered somewhat in 1999 as compared with previous years, as Health Units was reclassified into Public Administration, Education and Health Services sector.

Injury and Disease Summary

Based on person-years, Business, Personal and Professional Services is the third largest sector in Alberta after Retail and Wholesale Trade and Public Administration, Education and Health Services (see Table 5.0). The total lost-time claims rose by 7% resulting in a lost-time claim rate of 2.1 per 100 person-years worked. This is the only sector that saw no increase in its lost-time claim rate in 2000 and the rate was the second lowest in the province (see Table 5.8).

This sector is one of three where 57% of the lost-time claims involved females. This sector had a larger proportion (30%) of lost-time claims involving young workers (15-24 years) than the provincial value. About 41% of the claims were from workers who had less than 6 months of services with their current employer before their injury or disease. High proportions (21%) of lost-time claims were from chefs and cooks followed by janitors (9%). The sector's median workdays lost of 8 days was the same as the provincial rate and a duration rate of 63 days per 100 person-years worked was below the provincial average.

The Restaurants, Hotels and Recreation Services continued to be the largest sub-sector in terms of person-years. In 2000, it accounted for about 49% of total person-years in this sector. The lost-time claim rates and duration rates of all sub-sectors were near or below the provincial rate, with the exception of the personal services-maintenance sub-sector.

Table 5.8
Injury and Disease Statistics
Business, Personal and Professional Services

Industry Sector		1999	200	% Change
Business, Personal and Professional Services	Estimated Person-years	195,365	203,607	4.2%
	Lost-time Claims	4,056	4,356	7.4%
	Lost-time Claim Rate	2.1	2.1	0.0%
	Median Workdays Lost	8	8	0.0%
	Duration Rate	62	63	1.6%

Industry Sector		1999	2000	% Change
Animal Care Services	Estimated Person-years	1,436	1,432	-0.3%
	Lost-time Claims	36	34	-5.6%
	Lost-time Claim Rate	2.5	2.4	-4.0%
	Duration Rate	68	35	-48.5%
Private Health Services and Seniors Accommodations	Estimated Person-years	9,400	9,570	1.8%
	Lost-time Claims	191	207	8.4%
	Lost-time Claim Rate	2.0	2.2	10.0%
	Duration Rate	60	68	13.3%
Building and Grounds Maintenance	Estimated Person-years	12,761	12,338	-3.3%
	Lost-time Claims	284	282	-0.7%
	Lost-time Claim Rate	2.2	2.3	4.5%
	Duration Rate	75	75	0.0%

Continued ....

Table 5.8 (cont.)
Injury and Disease Statistics
Business, Personal and Professional Services

Industry Sector		1999	2000	% Change
Personal Services-Maintenance	Estimated Person-years	10,317	10,797	4.7%
	Lost-time Claims	413	413	0.0%
	Lost-time Claim Rate	4.0	3.8	-5.0%
	Duration Rate	174	173	-0.6%
Engineering, Architectural, Designing and Research Services	Estimated Person-years	23,781	23,510	-1.1%
	Lost-time Claims	68	87	27.9%
	Lost-time Claim Rate	0.3	0.4	33.3%
	Duration Rate	9	9	0.0%
Restaurants, Hotels and Recreation Services	Estimated Person-years	95,967	100,355	4.6%
	Lost-time Claims	2,528	2,725	7.8%
	Lost-time Claim Rate	2.6	2.7	3.8%
	Duration Rate	69	70	1.4%
Other Personal Services	Estimated Person-years	11,007	10,312	-6.3%
	Lost-time Claims	183	189	3.3%
	Lost-time Claim Rate	1.7	1.8	5.9%
	Duration Rate	55	58	5.5%

6. WCB Accepted Occupational Fatalities

A WCB accepted occupational fatality is defined as the death of a worker resulting from a work-related incident or exposure which has been accepted by the WCB for compensation. Some of the fatalities accepted in a particular year occurred in prior years (see Table 6.1B). This section provides a description of the occupational fatalities as well as the provincial fatality rates and rates in the major industry sectors.

6.1 Description of Fatalities Accepted by the WCB

In 2000, the WCB-Alberta accepted 118 occupational fatalities for compensation, an increase of about 4% from that of 1999. This is the second highest number of fatalities accepted over the last five years. About 47% of the fatalities accepted in 2000 were workplace incidents as a result of injuries sustained at a workplace compared to 38% in 1999.

Alberta Human Resources and Employment classifies occupational fatalities into three general event types:

- motor vehicle incidents;
- workplace incidents; and
- occupational disease.

Each of the types is described in more detail below.

Motor Vehicle Incidents

Motor vehicle incidents typically involve non-industrial vehicles operating on public roads in which the fatally injured worker was either the driver or a passenger. This type of occupational fatality also includes cases involving aircraft crashes, train crashes, helicopter crashes and water vehicle crashes. About 25% of the fatalities accepted in 2000 were motor vehicle incidents, a decrease of about 9% from 1999 (see Table 6.1A).

Workplace Incidents

Workplace incidents consist of cases in which the worker dies at a work site or as a result of injuries sustained at a work site. This is the type of fatality that Alberta Human Resources and Employment typically investigates. The proportion of workplace incidents accepted by the WCB increased to 47% in 2000 from 38% in 1999 (see Table.6.1A).

Occupational Disease

Occupational disease fatalities consist mostly of recognised occupational disease, that is, disease known to be primarily or exclusively work-related (e.g. asbestosis, black lung disease). Occupational diseases are frequently diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the fatal exposure occurred. *The occupational disease category, therefore, should not be interpreted to reflect present work site hazardous conditions or exposures.*

This category also includes heart attacks suffered on the job. In 2000, 28% of the total fatalities accepted, resulted from occupational disease, decreasing from 33% in 1999 to 28% in 2000 (see Table 6.1A). In 2000, 28% of the total fatalities resulted from occupational disease, although it decreased by 13% from 1999 (see Table 6.1A). The most frequent occupational disease fatalities accepted by the WCB in recent years relate to exposure to asbestos fibres. Exposure to asbestos can result in cancer and related obstructive diseases of the lungs and respiratory system, such as, asbestosis and mesothelioma (see Table 6.1B).

Table 6.1A
Description of Fatalities Accepted
By the Workers Compensation Board
Alberta, 1991-2000

	Motor Vehicle Incident		Workplace Incident		Occupational Disease		Total	
Year	Number of Fatalities	%	Number of Fatalities	%	Number of Fatalities	%	Number of Fatalities	%
1991	25	29.1%	33	38.4%	28	32.6%	86	100.0%
1992	29	29.3%	43	43.4%	27	27.3%	99	100.0%
1993	28	36.4%	30	39.0%	19	24.7%	77	100.0%
1994	30	40.5%	28	37.8%	16	21.6%	74	100.0%
1995	42	45.2%	29	31.2%	22	23.7%	93	100.0%
1996	33	36.3%	34	37.4%	24	26.4%	91	100.0%
1997	49	40.8%	37	30.8%	34	28.3%	120	100.0%
1998	37	35.2%	34	32.4%	34	32.4%	105	100.0%
1999	33	28.9%	43	37.7%	38	33.3%	114	100.0%
2000	30	25.4%	55	46.6%	33	28.0%	118	100.0%
Total	336	34.4%	367	37.6%	274	28.0%	977	100.0%

Table 6.1B
Fatal Claims Accepted by Category of Disease
Alberta: 1996-2000

	Year Accepted					Total Accepted	
Causes	**1996**	**1997**	**1998**	**1999**	**2000**	**Total**	**Percent**
Asbestos	13	24	26	31	20	114	69.9%
Silica (Gravel Dust)	1		1	1	4	7	4.3%
Coal Dust	1	2		1	1	5	3.1%
Other dust	5	1	3	1	3	13	8.0%
Chemicals	2	1		1	2	6	3.7%
Radiation		1		1	1	3	1.8%
Heart-related Diseases	1	4	4	2	1	12	7.4%
Infectious Diseases	1				1	2	1.2%
Lung-related Diseases		1				1	0.6%
Total	24	34	34	38	33	163	100.0%

6.2 Occupational Fatality Rates in Industry Sectors

The estimated occupational fatality rate for the province in 2000 was 104 deaths per million person-years worked, an increase of 2% from 1999 (see Table 6.2A). *It should be noted that, unlike the lost-time claim rate, the fatality rate is not a reliable indicator of the present risk of work-related injury and disease since conditions that resulted in the exposure or disease may not be present now.*

Like injury rates, fatality rates vary across industry sectors due to the different types of work activity performed in the various sectors. In order to reduce year-to-year variations, the period 1991 to 2000 was used to calculate the fatality rates for a sector by dividing the total number of accepted fatalities in a sector for the period 1991 to 2000 by the total number of person-years worked during that period. The fatality rates for the period considered, was greatest in the Agriculture and Forestry sector (see Table 6.2B). The estimated rate of 269 per million person-years worked is about 2.7 times the provincial rate of 100 per million person-years for the same period. Construction and Construction Trade Services; Transportation, Communication and Utilities; and Mining and Petroleum Development sectors all had a higher risk of occupational fatality. Fatality rates were lower than the provincial rate in the relatively less hazardous industry sectors of Public Administration, Education and Health Services; Retail and Wholesale Trade

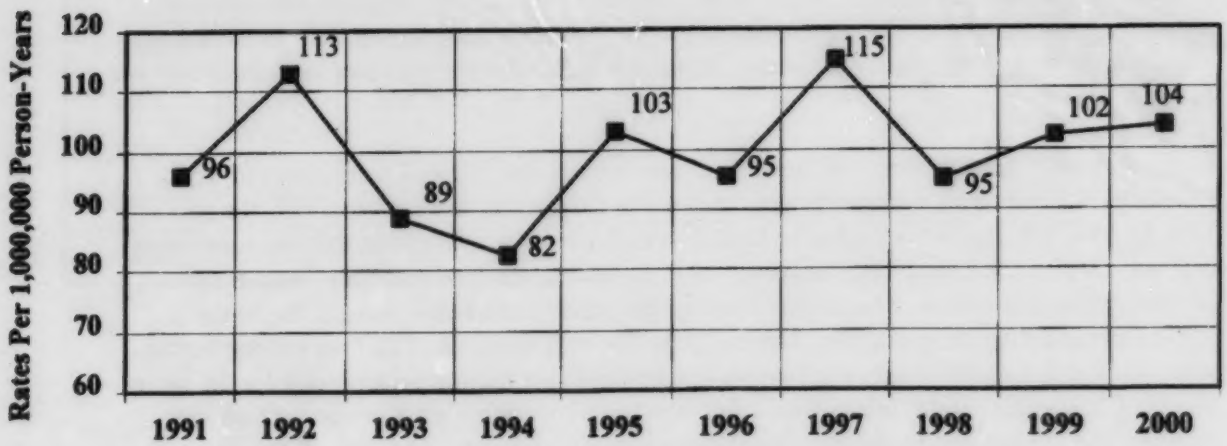
Services; Business, Personal and Professional Services; and Manufacturing and Processing sector (see Table 6.2B).

Caution should be used in considering the fatality rate for Agriculture and Forestry since most of the industries in this sector do not have workers compensation coverage, resulting in the under-estimation of the person-years worked and accepted fatalities. The high fatality rate may imply the sector is more hazardous, when in fact it may not be. Fatality rates reported might be more reliable for sectors where a majority of the industries have workers compensation coverage since the data only include these workers.

Table 6.2A
Occupational Fatality Rates[16]
Alberta: 1991-2000

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
Accepted Fatalities	86	99	77	74	93	91	120	105	114	118	977
Estimated Fatality Rate	96	113	89	82	103	95	115	95	102	104	100

Occupational Fatality Rates
Alberta: 1991-2000



16 Fatality rates are expressed as fatalities per million person-years worked. Estimates are based upon information provided by Alberta WCB. Fatalities occurring under Government of Canada jurisdiction are excluded from the calculation of the fatality rates.

References

Alberta Human Resources and Employment: *1999 Summary: Lost-Time Claims and Claim Rates*

Alberta Human Resources and Employment: *2001–2004 Business Plan, April 2001*

Alberta Human Resources and Employment: *Workplace Health and Safety Implementation Plan, 2000-2001*

Statistics Canada's Labour Force Statistics: *Historical 2000*

APPENDIX A
TERMS, DEFINITIONS AND FORMULAS

Appendix A: Terms, Definitions, and Formulas

Lost-Time Claim

A lost-time claim (LTC) is a claim for an occupational injury or disease, which disables the worker beyond the day of injury. Included are claims for which wages compensation are paid, permanent disability claims, fatalities, and cases in which the injured worker is assigned light duties or other modified work.

Person-Years

Person-year estimates are calculated from wage and payroll data provided by account holders to the WCB. Alberta Human Resources and Employment uses these data to estimate an average industry wage, and uses the average industry wage and employer payroll data to estimate person-years for each employer and each industry. One person-year is equivalent to one full-time worker working for one year, and can be assumed to equal 2,000 hours worked.

LTC Rate

The lost-time claim (LTC) rate is calculated by dividing the number of lost-time claims by the person-year estimate, and multiplying the result by 100. The LTC rate represents the probability or risk of disabling injury or disease to a worker during a period of one-year work. Comparisons of LTC rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.

$$\text{LTC Rate} = \frac{\text{Number of LTCs X 100}}{\text{Estimated Person-years}}$$

Duration (Days Lost)

The duration of disability is the number of days following the injury or disease for which the worker was disabled, and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from WCB. Alberta Human Resources and Employment obtains these data on March 31 of the year following the claim year, and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the duration information reported here underestimates the true impact of lost-time injury and disease.

Duration Rate

The duration rate is calculated by dividing the number of workdays lost (disability days) by the person-year estimate, and multiplying by 100. The result is expressed as days lost per 100 person-years worked, and indicates, in part, the economic impact of occupational injury and disease. Duration rates are not recommended as reliable indicators of full economic cost. In addition, readers are warned that duration rates are highly unstable when based on only a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.

$$\text{Duration Rate} = \frac{\text{Disability Days X 100}}{\text{Estimated Person-Years}}$$

Industry Coverage

This report includes all industry activity in Alberta covered by the Alberta WCB for occupational injury and disease to workers. Most industry sectors are included but notable exceptions include agriculture and finance. Several professional groups (e.g. the teaching and medical professions) are also excluded. Government of Canada is excluded except where the WCB pays administration or enhanced disability cost. Claims from the Government of Alberta employees are only included if the duration is longer than 80 days. About 75% of employed persons in Alberta are represented in this report.

WCB Accepted Fatality

An occupational fatality is the death of a worker which resulted from a work-related incident or exposure and which has been accepted by the WCB for compensation. A fatality is counted in the year it is accepted.

Fatality Rate

The fatality rate is calculated by dividing the number of accepted fatalities by the person-years estimate and multiplying the result by one million. The result is expressed as fatalities per million person-years worked. Government of Canada fatalities are excluded before the calculation of the fatality rate.

$$\text{Fatality Rate} = \frac{\text{Number of fatalities} \times 1{,}000{,}000}{\text{Estimated Person-years}}$$

NEC

Means 'Not Elsewhere Classified'.

UNS

Means 'Unspecified'.

APPENDIX B
WCB INDUSTRY CODES

Appendix B: - 2000 Sector Codes[18]

1. Agriculture & Forestry

Industry Codes: 01100, 01300, 01700, 01900, 01901, 01903, 02102, 02109, 02110, 03100, 03902, 04100, 60201, 62908, 85902

Sub-sector Codes:

Sub-sector	Industry
Agriculture	01100, 01300, 01700, 01900, 01901, 01903, 02102, 02109, 02110, 04100, 60201, 62908, 85902
Forestry	03100, 03902

2. Mining & Petroleum Development

Industry Codes: 06100, 06110, 06111, 06300, 06305, 06501, 06600, 06601, 07700, 08701, 09200, 09201, 09600, 09903, 09904, 09911, 09915, 09921, 34101, 34300, 42103, 42130, 42150, 51500, 51501, 73702

Sub-sector Codes:

Sub-sector	Industry
Coal Mining	06100, 06110, 06111, 08701
Pipeline Cleaning and Transmission	51500, 51501
Petroleum Producers	06300
Mine or Process Tar Sands & Salt	06600, 07700
Exploration	09200, 09201
Drilling of Wells	09600
Well Servicing with Service Rigs	09903
Oilfield Downhole Services	09911

[18] Codes are Workers' Compensation Board industry codes

3 Manufacturing & Processing

Industry Codes: 01103, 02101, 02112, 07900, 10100, 10104, 10500, 11202, 12301, 12304, 12400, 12900, 13100, 13101, 13300, 13500, 13900, 13904, 13905, 14100, 14300, 14500, 16900, 16901, 16902, 17200, 17900, 17901, 21300, 22101, 22900, 22901, 24900, 25100, 25401, 25900, 25901, 26101, 26104, 26401, 27102, 27103, 27200, 27300, 27402, 28600, 28603, 28800, 28900, 29100, 29102, 29200, 29600, 29700, 30100, 30101, 30403, 30407, 30412, 30700, 30801, 33500, 33602, 33606, 33900, 33902, 34100, 34500, 34700, 34702, 34800, 35200, 35401, 36500, 37201, 37301, 37402, 37801, 37805, 38100, 38200, 38201, 38500, 39300, 39701, 39901, 62304, 62500, 62700, 69903, 86201, 86202, 89301, 89401, 89916

Sub-sector Codes:

Sub-sector	Industry
Meat, Hides, and Pelt Products	01103, 10100, 10104, 17200
Clothing and Textile Products	17900, 21300, 22900, 22901, 24900
Food and Beverage Products	02101, 02112, 10500, 11202, 12301, 12400, 12900, 13100, 13101, 13300, 13500, 13900, 13904, 13905, 14100, 14300, 14500, 37402
Wood Products	25100, 25401, 25900, 25901, 27102, 27103
Furniture and Allied Products	26101, 26104
Printing and Publishing Products	27402, 28600, 28800, 28900, 86202, 89301
Foundries(not Steel), Rubber, and Non-metallic Products	16901, 27200, 29700, 34100, 34500, 34700, 34702, 34800, 35200, 35401, 38500,
Fabricated and Primary Metal (esp. Steel) Products	26401, 29100, 29102, 29200, 30100, 30101, 30403, 30407, 30412, 30700, 30801, 33602, 33606, 62500, 62700, 89401
Industrial Equipment	16902, 38100,62304
Gases, Fertiliser, and Petrochemical-Refining & Mfg,	36500, 37201, 37801, 37805
Plastic Products	37301

4. Construction & Construction Trade Services

Industry Codes: 01904, 01905, 02100, 02103, 02105, 02200, 06304, 06306, 09902, 09927, 30302, 31501, 31507, 31508, 35301, 40400, 40401, 40602, 40604, 40901, 40905, 40907, 42102, 42104, 42105, 42106, 42109, 42110, 42111, 42113, 42115, 42117, 42118, 42120, 42121, 42122, 42124, 42125, 42127, 42128, 42129, 42131, 42133, 42135, 42136, 42139, 42141, 42144, 42151, 42156, 42158, 42159, 42160, 42161, 42184, 51502, 51503, 51504, 51506, 86401, 86413, 86911, 86922, 89600, 89605, 89928

Sub-sector Codes:

Sub-sector	Industry
Drywall and Residential Construction	02100, 40401, 42111, 42113, 42115, 42125, 42133, 42135, 42136, 42141
Glaziers	30302, 42121
Industrial Construction	40400, 42104, 42105, 42106, 42109, 42120, 42127, 42156, 42159, 42161, 51504, 86911, 89605
Masonry	42102
Mechanical, Electrical and Insulation	31508, 42110, 42117, 42122, 42124, 42144, 42184, 89600
Roadbuilders	40602, 40604, 40905
Roofers	42118, 42139, 42151
Scaffolders	89928

5. Transportation, Communication & Utilities

Industry Codes: 27400, 42155, 50100, 50104, 50105, 50106, 50107, 50200, 50201, 50203, 50607, 50701, 50714, 50720, 50800, 50801, 50802, 51200, 51705, 52700, 54300, 54301, 54501, 57200, 57400, 57901, 65402, 85100, 85907, 85914, 85918, 85934

Sub-sector Codes:

Sub-sector	Industry
Transportation Sub-sectors	
Air Services	50100, 50104, 50105, 50106, 50107, 50200 50201, 50203
Rail Services	50607
Trucking Services	42155, 50701, 50714, 50720
Bus, Taxi, and Limousine Services	50800, 50801, 50802, 51200
Communications and Entertainment Sub-sectors.	
Radio, TV, Movies Live Theatre and Ballet	54300, 85100, 85907, 85914, 85918, 85934
Telecommunication, Closed Circuit TV, and Cable Vision	54301, 54501
Utilities Sub-sectors	
Utilities-Electric	57200
Utilities-Natural Gas	57400
Garbage Collection, Recycle, Disposal and Towing Services	27400, 57901, 65402

6. Retail & Wholesale Services

Industry Codes: 16300, 25403, 33901, 37902, 52400, 60800, 62200, 62201, 62300, 62302, 62303, 62701, 62900, 62903,63100, 63103, 63105, 64200, 65400, 65406, 65600, 65800, 65808, 65809, 66300, 66900, 67300, 67601, 67602, 67604, 67802, 68100, 69100, 69200, 69300, 69301, 69500, 69901, 69904, 69912, 69914, 69915, 69916, 86905, 86909, 89100, 89908, 89910, 89922

Sub-sector Codes:

Sub-sector	Industry
Wholesale Operations	62900
Food and Beverage Stores	63100, 63103, 63105, 65406, 69916
Industrial and Farm Equipment and Products	37902, 52400, 60800, 62200, 62201, 62302, 62303, 69300, 86905, 89910,
Automobiles, Sport Vehicles, Small engines, and Trailers	16300, 62201, 62701, 65400, 65600, 65800, 65808, 65809, 69912, 69915, 89922,
Office, Medical, and Entertainment Equipment	33901, 62300, 67602
Yard and Home Improvement Centres	25403, 69301
Other Retail Services	62903, 64200, 66300, 66900, 67300, 67601, 67604, 67802, 68100, 69100, 69200, 69500, 69901, 69904, 69914, 86909, 89100, 89908

7. Public Administration, Education & Health Services

Industry Codes: 36502, 57601, 57602, 80102, 80103, 80105, 80106, 80301, 80302, 80305, 80311, 80500, 80700, 80701, 82100, 82704, 82705, 82710, 82712, 82801, 82806, 82808, 82812, 85909, 86927, 86930, 89923, 89925, 93200, 93201, 93202, 95100, 95101, 95102, 95104, 95105, 95108

Sub-sector Codes:

Sub-sector	Industry
Public Administration Sub-sector.	
Alberta Govt Public Services	93200, 93201, 93202
Villages, Towns, and Cities	95100, 95101, 95104
Other Public Administration	36502, 57601, 57602, 82712, 86930, 95102, 95105, 95108
Education Services Sub-sectors	
Education, Museums, and Libraries	80102, 80103, 80105, 80106, 80301, 80302, 80305, 80311, 80500, 80700, 80701, 86927, 89923
Health Services Sub-sectors.	
Health Care Centres	82100, 82705
Health and Social Services	82704, 82710, 82801, 82806, 82808, 82812, 85909, 89925

8. Business, Personal & Professional Services

Industry Codes: 02104, 02116, 02117, 09900, 37401, 38101, 38102, 51701, 51902, 52705, 62904, 70200, 73500, 73501, 80703, 82500, 82700, 82701, 82703, 82800, 83100, 85300, 85900, 85901, 85904, 85916, 85919, 85922, 85925, 86200, 86400, 86403, 86405, 86408, 86409, 86410, 86411, 86414, 86600, 86901, 86902, 86906, 86907, 86913, 86918, 86920, 86921, 86923, 87200, 87300, 87301, 87400, 87401, 87402, 87500, 87501, 87502, 87503, 87505, 87508, 87510, 87600, 87603, 87700, 87900, 89101, 89104, 89701, 89702, 89703, 89704, 89705, 89901, 89902, 89907, 89913, 89924, 89927, 93109, 93113

Sub-sector Codes:

Sub-sector	Industry
Business Services Sub-sectors...	
Building and Ground Maintenance	87500, 87510, 89702
Engineering, Architectural, Designing and Research Services	09900, 86400, 86403, 86405, 86408, 86409, 86410, 86411, 86414, 86913, 86923, 89927
Personal Services Sub-sectors...	87300, 87301, 89701, 89703, 89704, 89705
Personal Services-Maintenance	
Restaurant, Hotel, and Recreation Services	51701, 51902, 80703, 85300, 85900, 85901, 85904, 85916, 85919, 85922, 87501, 87502, 87503, 87508, 87600, 87603, 89901, 89907
Other Personal Services	83100, 87200, 87400, 87401, 87402, 87700, 87900
Professional Services Sub-sectors...	
Animal Care Services	02104, 02116, 02117
Private Health Services & Seniors' Accommodations	37401, 38101, 38102, 82500, 82700, 82701, 82703, 82800

For further information contact:

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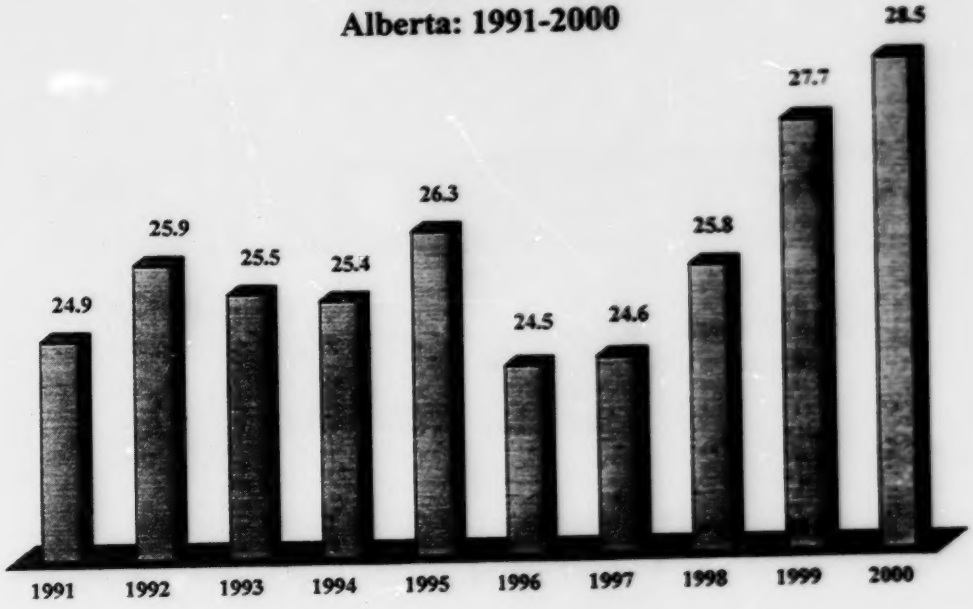
Alberta Human Resources and Employment website:
http://www.gov.ab.ca/hre

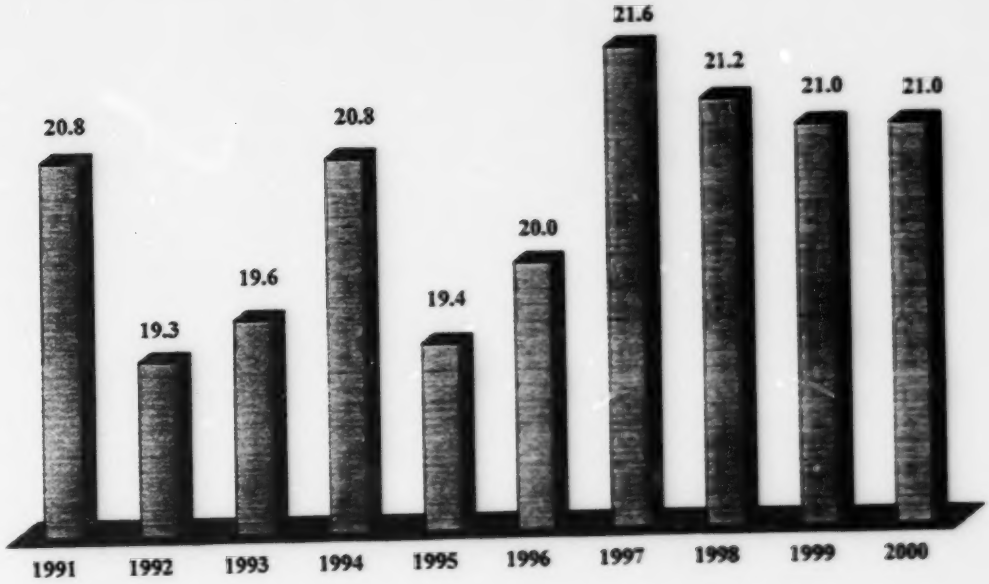
Alberta Workplace Health and Safety website:
http://www.whs.gov.ab.ca

APPENDIX C
SELECTED GRAPHS

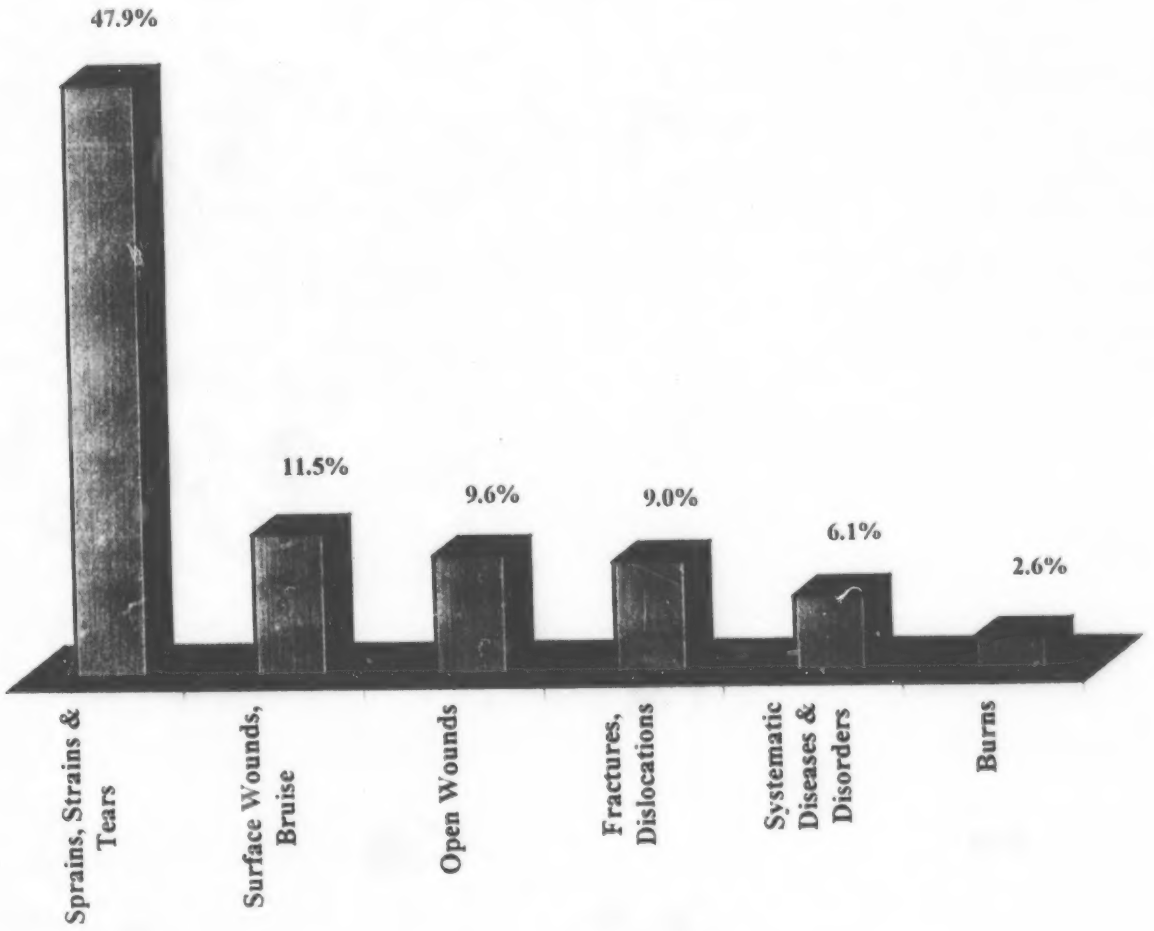
Proportion of Lost-Time Claimants Who Are Women Alberta: 1991-2000



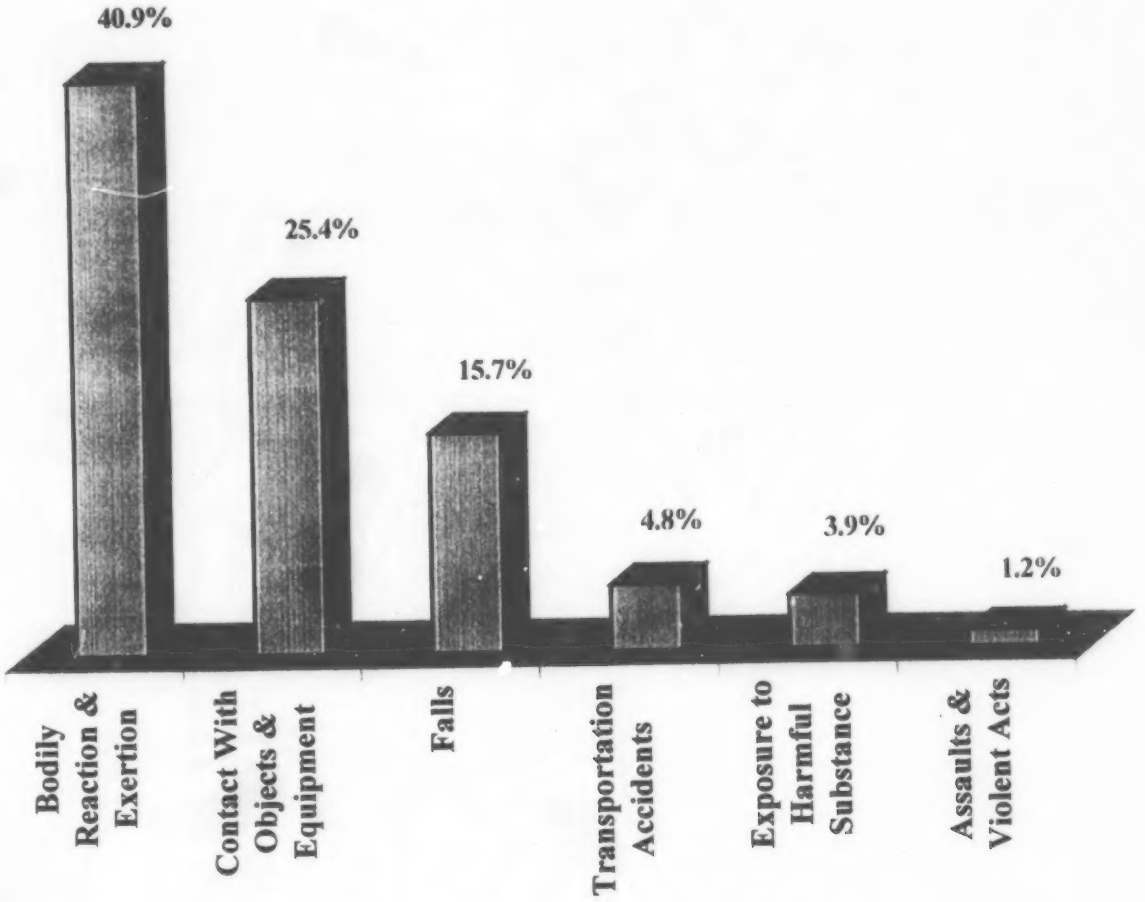
Proportion of Lost-Time Claimants Who Are Young (Age 15-24) Alberta: 1991-2000



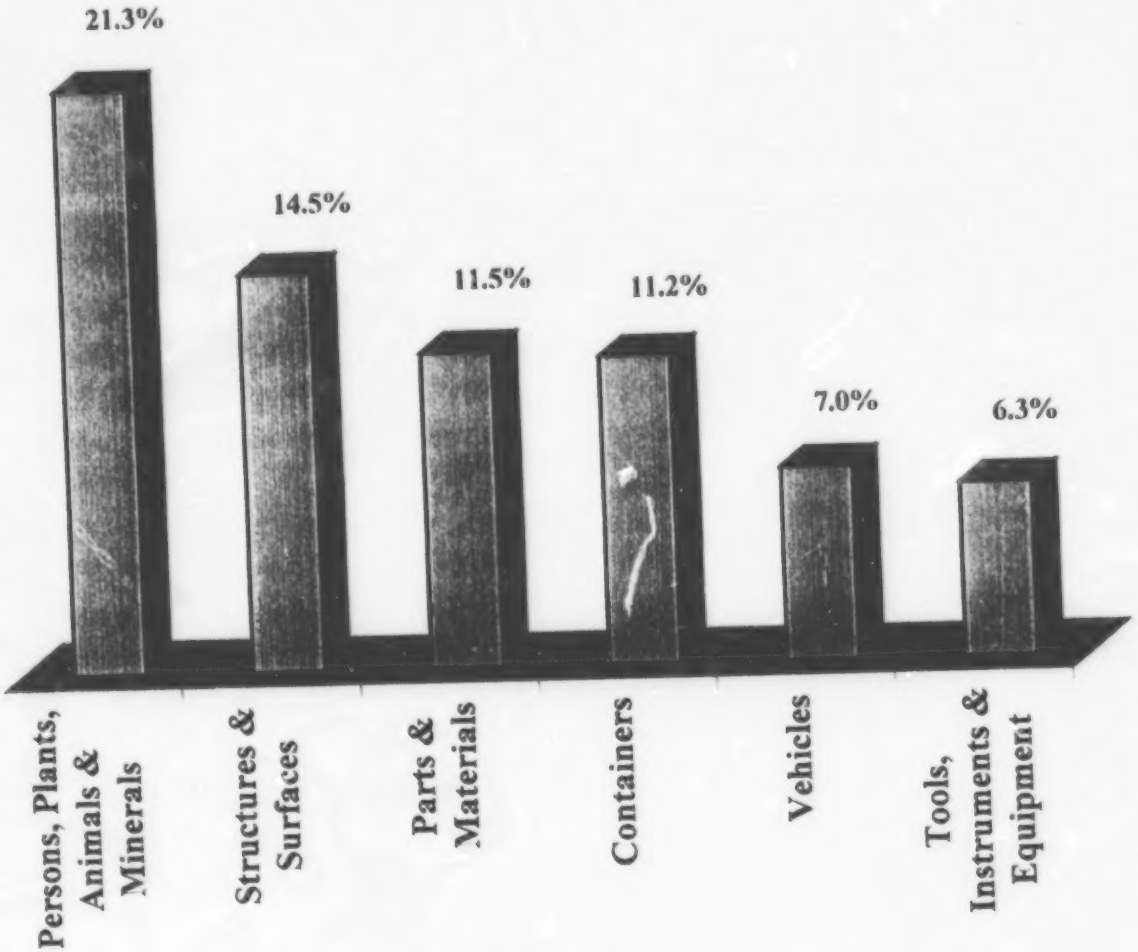
LOST-TIME CLAIMS BY COMMON NATURE OF INJURY OR DISEASE ALBERTA, 2000



LOST-TIME CLAIMS BY COMMON TYPE OF EVENT OR EXPOSURE ALBERTA, 2000



LOST-TIME CLAIMS BY COMMON SOURCE OF INJURY OR DISEASE ALBERTA, 2000



LOST-TIME CLAIMS BY COMMON PART OF BODY INJURED ALBERTA, 2000